Operation

GLASCRAFT
COMPOSITES EQUIPMENT BY GRACO

MCG-SSP

GC-1392 Z

Multi-Color Gel-Coat System
For use with Polyester Resin and Gel-Coat

Maximum fluid working pressure:
20240-00 - 1300 psi. (9 MPa, 90 bar)
22029-00 - 2000 psi. (14 MPa, 138 bar)

Maximum air pressure:
100 psi. (0.7 MPa, 7 bar)

Important Safety Instructions
Read all warnings and instructions in this manual. Save these instructions.

CE Ex II 2 G PG HO03

Contents

Warnings

Set-up

Maintenance

Technical Data

N/A = Non Applicable

Warnings

The following warnings are for the setup, use, grounding, maintenance, and repair of this equipment. The exclamation point symbol alerts you to a general warning and the hazard symbol refers to procedure-specific risk. Refer back to these warnings. Additional, product-specific warnings may be found throughout the body of this manual where applicable.

- **See Important Safety Information - MEKP, Polyester Resins and Gel-Coats and Spraying and Lamination Operations section of this manual.**

WARNING

FIRE AND EXPLOSION HAZARD

Flammable fumes, such as solvent and paint fumes, in **work area** can ignite or explode. To help prevent fire and explosion:

- Use equipment only in well ventilated area.
- Eliminate all ignition sources; such as pilot lights, cigarettes, portable electric lamps, and plastic drop cloths (potential static arc).
- Keep work area free of debris, including solvent, rags and gasoline.
- Do not plug or unplug power cords, or turn power or light switches on or off when flammable fumes are present.
- Ground all equipment in the work area. See **Grounding** instructions.
- Use only grounded hoses.
- Hold gun firmly to side of grounded pail when triggering into pail.
- If there is static sparking or you feel a shock, **stop operation immediately.** Do not use equipment until you identify and correct the problem.
- Keep a working fire extinguisher in the work area.

PERSONAL PROTECTIVE EQUIPMENT

You must wear appropriate protective equipment when operating, servicing, or when in the operating area of the equipment to help protect you from serious injury, including eye injury, inhalation of toxic fumes, burns, and hearing loss. This equipment includes but is not limited to:

- Protective eyewear
- Clothing and respirator as recommended by the fluid and solvent manufacturer
- Gloves
- Hearing protection

TOXIC FLUID OR FUMES HAZARD

Toxic fluids or fumes can cause serious injury or death if splashed in the eyes or on skin, inhaled, or swallowed.

- Read MSDS's to know the specific hazards of the fluids you are using.
- Store hazardous fluid in approved containers, and dispose of it according to applicable guidelines.
- Always wear impervious gloves when spraying or cleaning equipment.

Warnings

WARNING

SKIN INJECTION HAZARD

High-pressure fluid from gun, hose leaks, or ruptured components will pierce skin. This may look like just a cut, but it is a serious injury that can result in amputation. **Get immediate surgical treatment.**

- Do not point gun at anyone or at any part of the body.
- Do not put your hand over the dispense outlet.
- Do not stop or deflect leaks with your hand, body, glove, or rag.
- Engage trigger lock when not spraying.
- Follow **Pressure Relief Procedure** in this manual, when you stop spraying and before cleaning, checking, or servicing equipment.

MOVING PARTS HAZARD

Moving parts can pinch or amputate fingers and other body parts.

- Keep clear of moving parts.
- Do not operate equipment with protective guards or covers removed.
- Pressurized equipment can start without warning. Before checking, moving, or servicing equipment, follow the **Pressure Relief Procedure** in this manual. Disconnect power or air supply.

EQUIPMENT MISUSE HAZARD

Misuse can cause death or serious injury.

- Do not operate the unit when fatigued or under the influence of drugs or alcohol.
- Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See **Technical Data** in all equipment manuals.
- Use fluids and solvents that are compatible with equipment wetted parts. See **Technical Data** in all equipment manuals. Read fluid and solvent manufacturer's warnings. For complete information about your material, request MSDS forms from distributor or retailer.
- Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only.
- Do not alter or modify equipment.
- Use equipment only for its intended purpose. Call your distributor for information.
- Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces.
- Do not kink or over bend hoses or use hoses to pull equipment.
- Keep children and animals away from work area.
- Comply with all applicable safety regulations.

PRESSURIZED ALUMINUM PARTS HAZARD

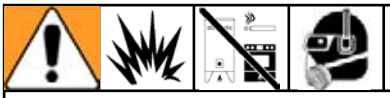
Do not use 1,1,1-trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents in pressurized aluminum equipment. Such use can cause serious chemical reaction and equipment rupture, and result in death, serious injury, and property damage.

Important Safety Information

Methyl Ethyl Ketone Peroxide (MEKP)

MEKP is among the more hazardous materials found in commercial channels. Proper handling of the “unstable (reactive)” chemicals presents a definite challenge to the plastics industry. The highly reactive property which makes MEKP valuable to the plastics industry in producing the curing reaction of polyester resins and gel-coats also produces the hazards which require great care and caution in its storage, transportation, handling, processing and disposal.

Workers must be thoroughly informed of the hazards that may result from improper handling of MEKP, especially in regards to contamination and heat. They must be thoroughly instructed regarding the proper action to be taken in the storage, use and disposal of MEKP and other hazardous materials used in the laminating operation.



MEKP is flammable and potentially explosive, as well as potentially damaging to the eyes and skin.
Read material manufacturer’s warnings and material MSDS to know specific hazards and precautions related to MEKP.

Contaminated MEKP can become explosive. Prevent contamination of MEKP with other materials, which includes, but is not limited to polyester overspray, polymerization accelerators and promoters, and non-stainless metals. Even small amounts of contaminates can make MEKP explosive. This reaction may start slowly, and gradually build-up heat, which can accelerate until fire or an explosion result. This process can take from seconds to days.

Heat applied to MEKP, or heat build-up from contamination reactions can cause it to reach what is called its Self-Accelerating Decompisition Temperature (SADT), which can cause fire or explosion.

Spills should be promptly removed, so no residues remain. Spillage can heat up to the point of self-ignition. Dispose in accordance with manufacture’s recommendation.

Store MEKP in a cool, dry and well-ventilated area in the original containers away from direct sunlight and away from other chemicals. It is strongly recommended that the storage temperature remain below 86° F (30° C). Heat will increase the potential for explosive decomposition. Refer to NFPA 432.
Keep MEKP away from heat, sparks and open flames.

Current catalysts are premixed and do not require any diluents. GlasCraft strongly recommends that diluents not be used. Diluants add to the possibility of contaminates entering the catalyst system. Never dilute MEKP with acetone or any solvent since this can produce an extremely shock-sensitive compound which can explode.

Use only original equipment or equivalent parts from GlasCraft in the catalyst system (i.e.: hoses, fittings, etc.) because a hazardous chemical reaction may result between substituted parts and MEKP.

To prevent contact with MEKP, appropriate personal protective equipment, including chemically impermeable gloves, boots, aprons and goggles are required for everyone in the work area.

Polyester Resins and Gel-Coats

Spraying materials containing polyester resin and gel-coats creates potentially harmful mist, vapors and atomized particulates. Prevent inhalation by providing sufficient ventilation and the use of respirators in the work area.

Read the material manufacturer’s warnings and material MSDS to know specific hazards and precautions related to polyester resins and gel-coats.

To prevent contact with polyester resins and gel-coats, appropriate personal protective equipment, including chemically impermeable gloves, boots, aprons and goggles are required for everyone in the work area.

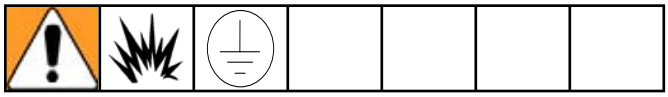
Spraying and Lamination Operations

Remove all accumulations of overspray, FRP sandings, etc. from the building as they occur. If this waste is allowed to build up, spillage of catalyst is more likely to start a fire.

If cleaning solvents are required, read material manufacture’s warnings and material MSDS to know specific hazards and precautions. (GlasCraft recommends that clean-up solvents be nonflammable.)

GlasCraft recommends that you consult OSHA Sections 1910.94, 1910.106, 1910.107 and NFPA No. 33, Chapter 16,17, and NFPA No. 91 for further guidance.

Grounding



This equipment needs to be grounded.

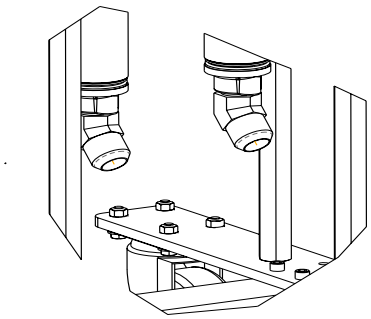
Ground the dispense gun through connection to an GlasCraft approved grounded fluid supply hose.

Check your local electrical code and related manuals for detailed grounding instructions of all equipment in the work area.

A grounding wire and clamp are provided, assembly p/n 17440-00 with all FRP equipment.

Set-Up

1. Remove the cap plugs from the bottom inlet of each material pump.



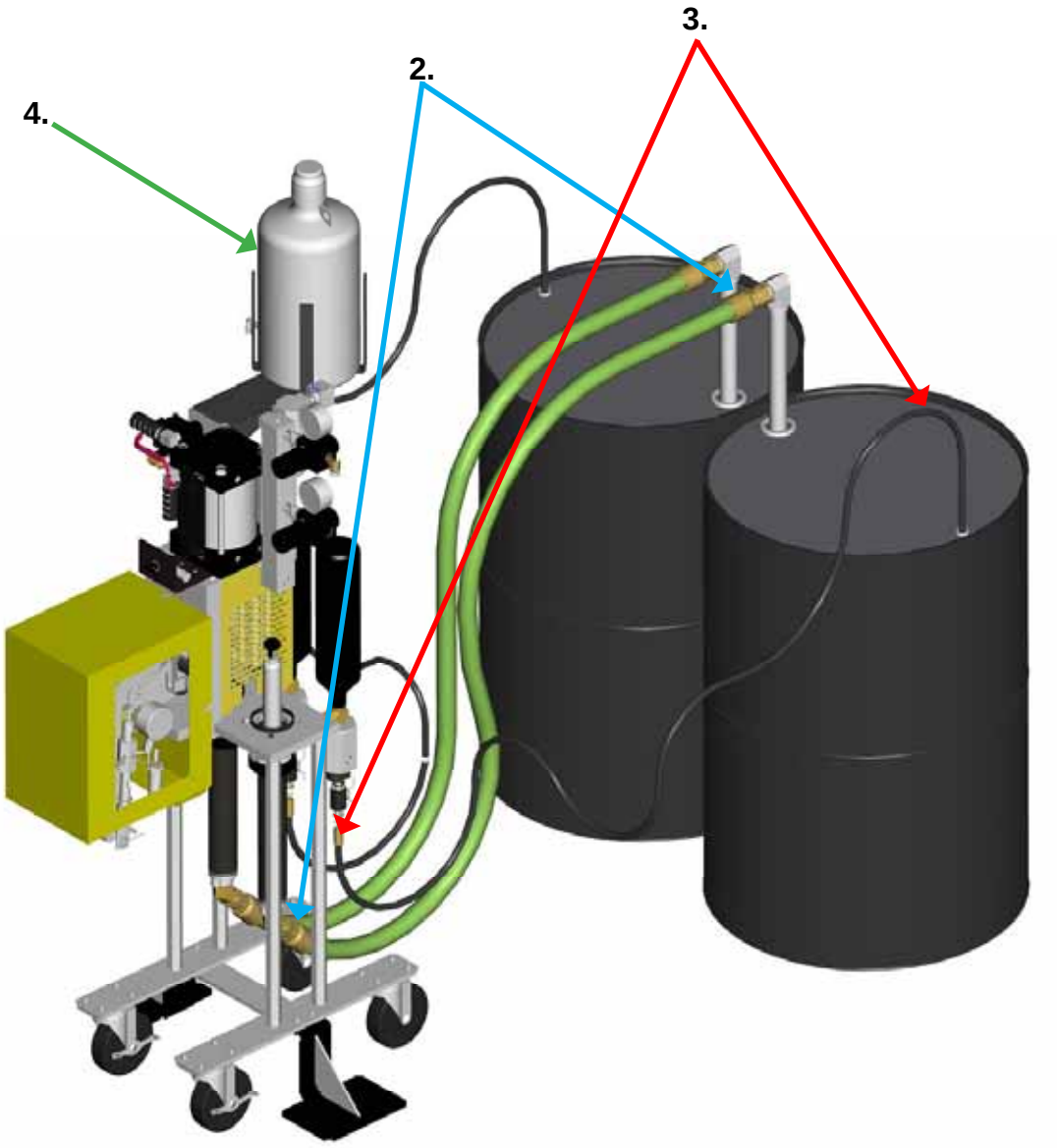
2. Attach one end of the green material hoses to the pump inlets and attach the other end to the pick- up tubes and place them in the material drums.

3. Attach the “fitting” end of the recirculation hoses to the bypass valve on the material pumps. and place the other end in the material drum, either in the small bung or the large bung and tape it to the pick-up tube.

4. Inspect Catalyst bottle for debris; clean if necessary.

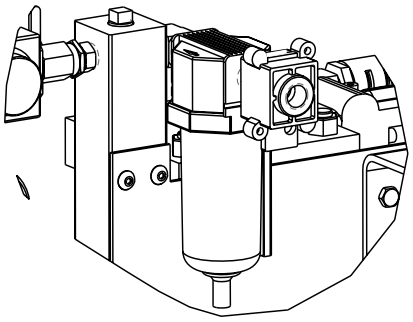
Fill catalyst supply bottle. Two gallons; maximum amount in supply bottle.

5. Inspect the material hoses to make sure they are not bent.

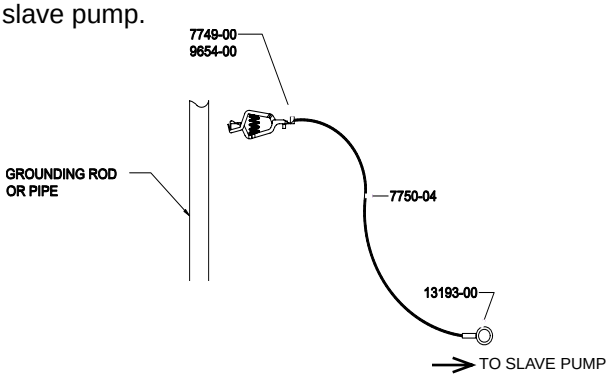


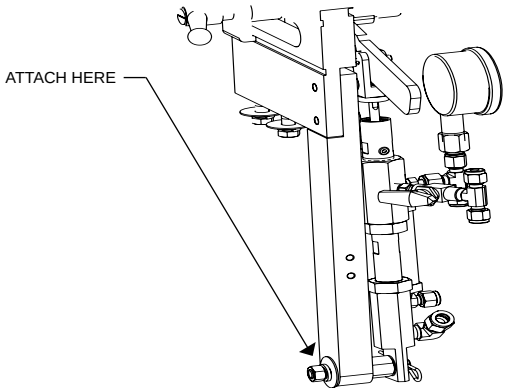
Set-Up

6. Connect a main air supply to system. (GlasCraft recommends a minimum of 3/8”dia. airline.)

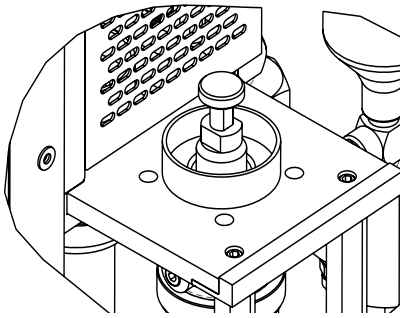


7. Securely attach clamp assembly, P/N 17440-00, to permanently grounded rod or pipe and to the slave pump.





8. Fill Lube Cup at the top of fluid section half (½) full of suitable pump lube.



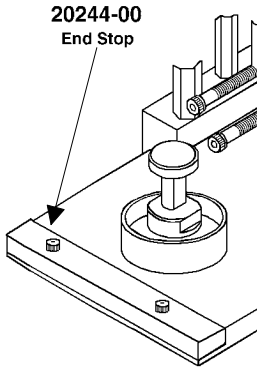
Additional Color Installation Instructions

When adding "ODD" number colors (i.e. third color, fifth color, etc.), you will need one Hardware Kit and one Fluid Section Kit.

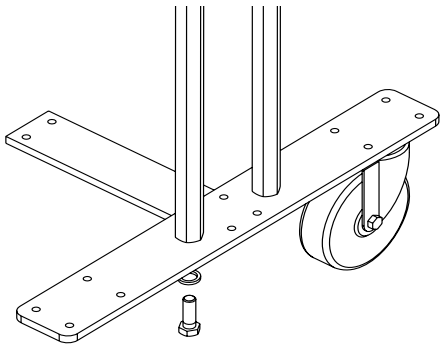
When adding "EVEN" number colors (i.e. fourth color, sixth color, etc.), you will need only one hardware, and two fluid section kits.

Additional Color	
Part Number	**Description**
20265-00	HARDWARE PARTS KIT
20266-00	FLUID SECTION KIT

1. Remove end stop plate from existing track assembly.

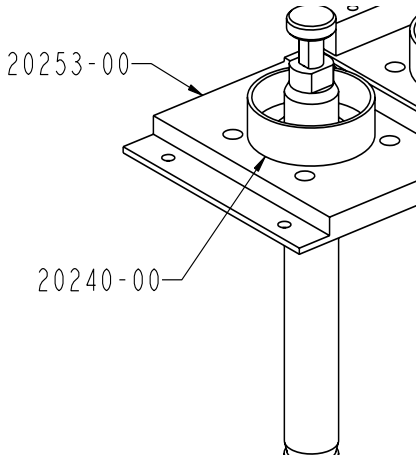


2. Assemble hardware kit components as shown.



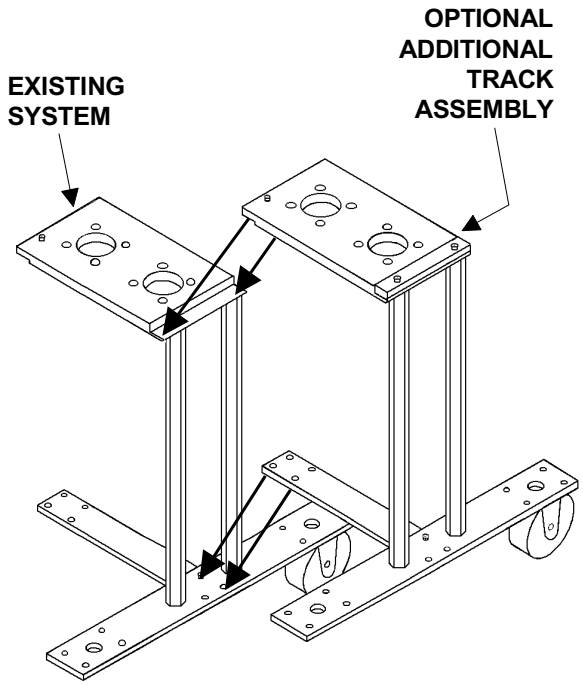
Tighten Bolts and Nuts ONLY finger-tight until additional track assembly is fitted to existing track assembly.

3. Mount fluid section kit as shown.



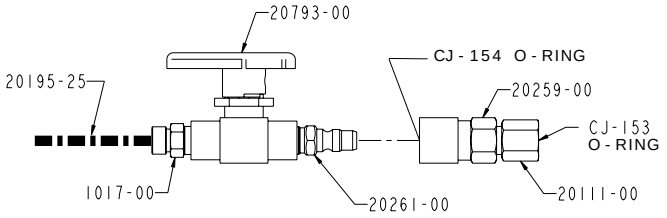
Be certain to assemble End Stop Plate, P/N 20244-00, to new Fluid Section Mounting Plate, P/N 20253-00, before completing assembly.

4. Assemble additional track assembly to existing track assembly. Tighten all bolts and nuts securely.

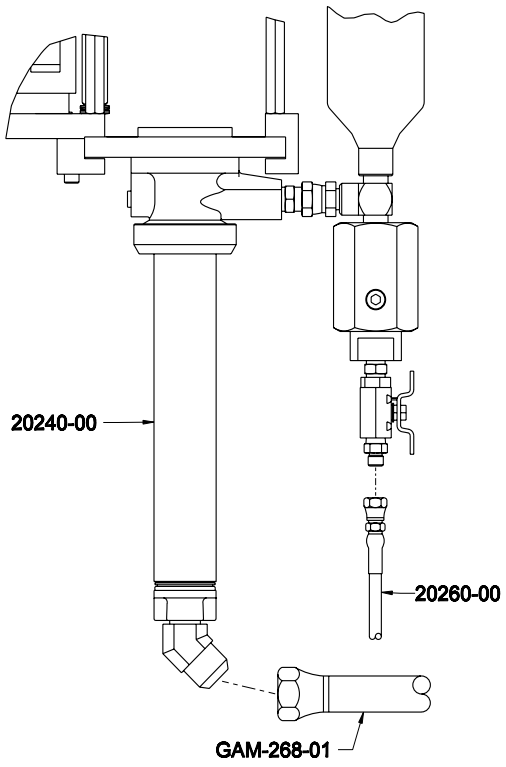


Set-Up

5. Assemble material valve and Q.D. Fitting onto material Hose.



6. Install Material Hose, Recirculation Hose, and Material Pick-Up Kit, P/N GAM-268-01.



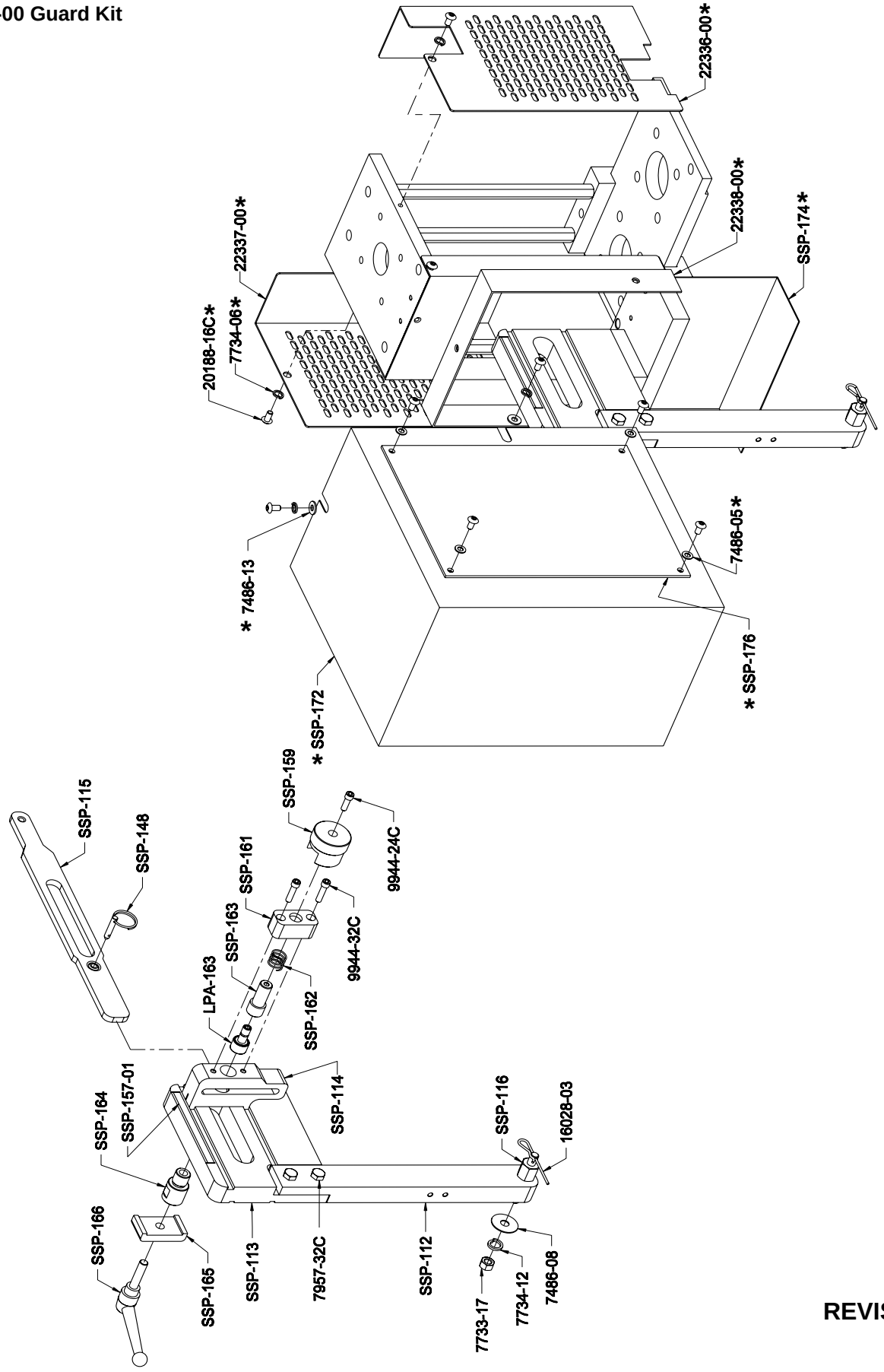
Be certain that all fittings, bolts and nuts are tightened securely before operating new Fluid Section Assembly.

7. Follow Start-Up Instruction steps 5 through 13 for initial Fluid Section priming.

8. When priming process is complete, new Fluid Section is ready for use.

Set-Up

22349-00-00 Guard Kit

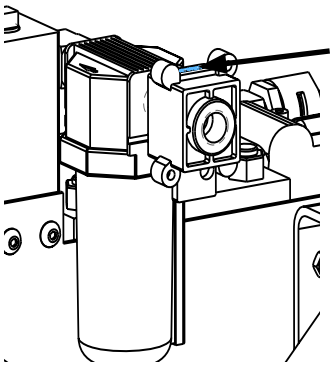


REVISION Y

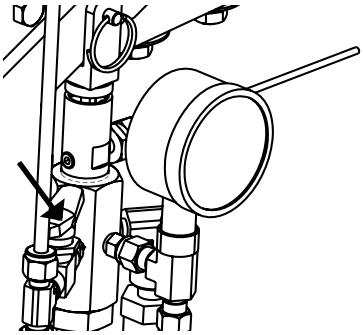
Pressure Relief Procedure

To relieve fluid and air pressures:

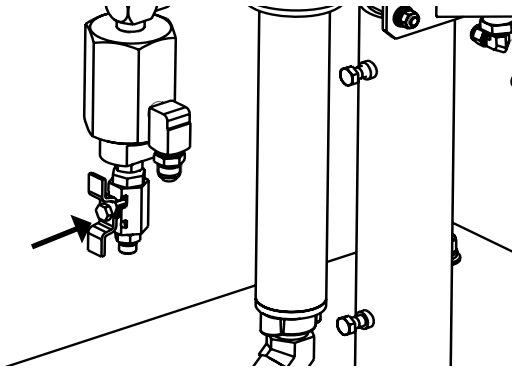
1. *Push down Yellow slide valve, P/N 21402-00 to bleed off air to system.*



2. *Open P/N 21228-00 on catalyst pump to recirculation position.*



3. *Open P/N 21192-00 on bottom of material pump.*



4. *Verify the Trigger Lock is in the Locked position. See Spray Gun manual for trigger lock location.*

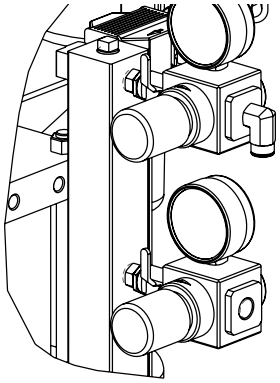
Start-Up

Refer to specific User Manuals for detailed component start-up and shut-down instructions.

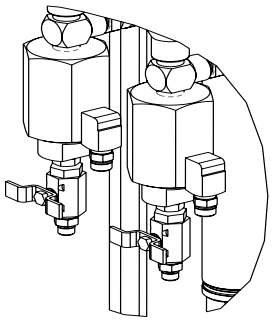
Before Operating the System

1. Make sure all hose connections are tight and secure.

2. Make sure the ball valves on the manifold are off and all of the regulators are dialed down to zero. (Turning regulators counter-clockwise will dial them down.)



3. Close the bypass valve on each of the fluid sections. (Turn clockwise to close).



4. Each new GlasCraft system has been fluid tested at the factory. Our pump test solution is red-colored DBP (Di-N-Butyl Phthalate). There may be a residual amount of DBP in system that should be-evacuated before putting the unit into production. During the initial start-up, ½ to 1 gallon of material should be dispensed. This is typically adequate to remove the test material. If desired, the fluid pump can be flushed with a suitable cleaning solution to evacuate DBP before priming with material.

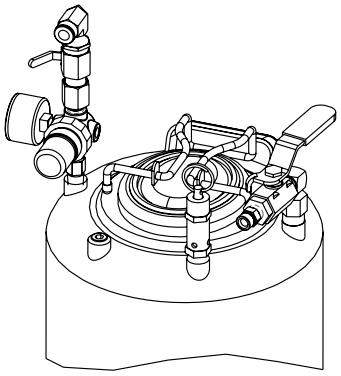
5. Review all service manuals, which contain detailed operation and safety instructions.

Start-Up *Internal Mix*

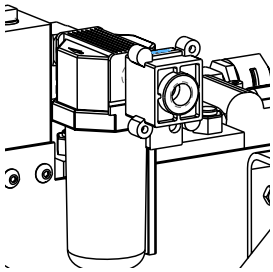
Solvent

***Before initial operation of any internal mix system, ensure that the solvent flush set-up is fully operational.**

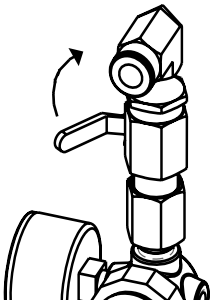
1. Fill solvent pot with suitable flush material.



2. Open main air valve at manifold.

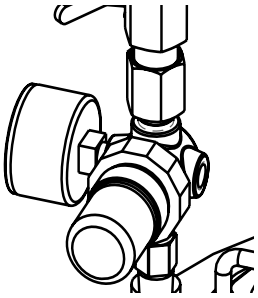


3. Open ball valve at solvent regulator.

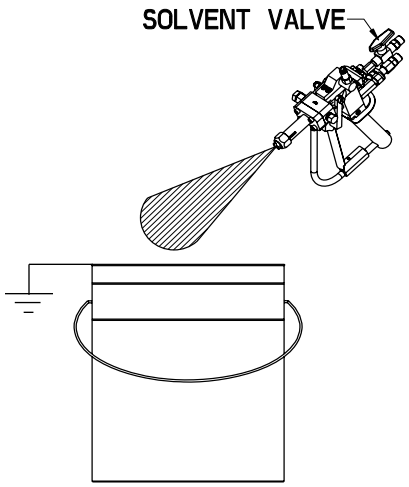


Start-Up

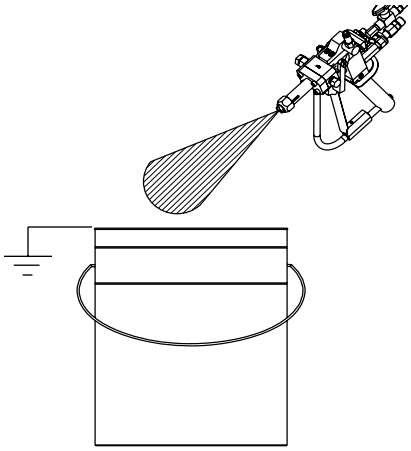
4. Dial up 90-100 psi of pressure at solvent regulator.



5. Using a proper collection container, open solvent flush valve at the INDy gun. Ensure that you have proper solvent flushing at the gun.



5. While continuing to hand prime the pump, trigger gun into suitable collection container.



6. Continue to hand prime the pump, with trigger pulled and inspect the flow of catalyst from nozzle.

7. Once all air is evacuated and a steady stream of catalysts observed, the system is primed with catalyst.

8. Release trigger and stop hand priming.

9. Solvent flush gun

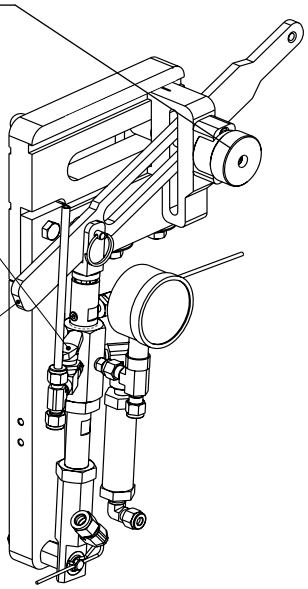
Catalyst

1. Pull and rotate Pivot knob to disengage the catalyst drive arm.

2. Turn the catalyst slave pump yellow ball valve to the open position.

3. Hand prime the pump until a steady stream of catalyst flows back to the bottle.

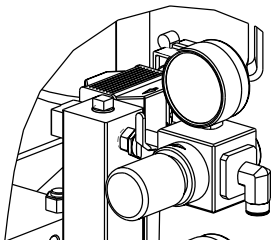
4. Close the ball valve. Hand stroke the pump until it developes 100-200 PSI.



Start-Up

Gel-Coat

1. Open ball valve at material regulator.



2. With the roller cam still unattached from slave pump linkage arm, slowly begin to dial up pressure at material regulator. Between 5-15 psi, the pump will begin to cycle. The pump will continue to fill the system with material and will stall out when the polyester arrives at the gun.

- Material viscosity, temperature, filler load, surface tension and other factors will ultimately determine the proper material pressure that will be required.

- GlasCraft recommends an initial start-up pressure of 20-25 psi.

3. Dial up material pump pressure to initial start-up pressure.

4. Prime the slave pump to proper psi. depending on which gun is being used.

5. Rotate Pivot Knob, P/N SSP-159 to Re-engage catalyst drive arm.

There may be a small amount of air still in the material. It will push itself out quickly.

6. Check and confirm the following points:

- Confirm that you are getting a complete, consistent and uniform mix of catalyst. If red dye catalyst is being used, this will be easy to confirm visually.

- While triggering the gun onto a test panel, visibly inspect the fluid pressure gauge on the catalyst pump.

- The catalyst pressure should approximately match the fluid pressure generated by the material pump.

- Example:

- With 13:1 pump dialed up to 20 psi at the regulator, you will have (13x20=260) 260 psi fluid pressure.

- With 20:1 pump dialed up to 20 psi at the regulator, you will have (20x20=400) 400 psi fluid pressure.

- While spraying the gun, inspect catalyst pressure gauge to confirm catalyst pressure.

- Because of material viscosity, size of nozzle, hose length and other factors, the catalyst pressure may not exactly exactly match material pressure.

- Catalyst pressure should be +/- 50 psi of material pressure.

7. After confirming acceptable catalyst-to-material pressure, spray several test strips or panels to confirm geltime and uniform catalization. Catalyst pressure should stay consistent and steady.

8. Inspect material dispense pattern.

9. Adjust material pressure to achieve desired pattern of material.

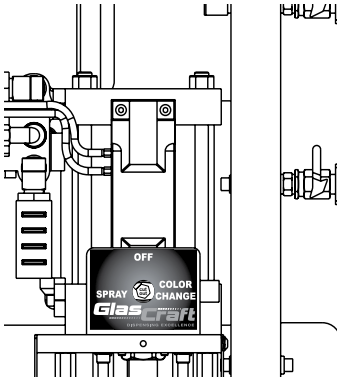
10. Solvent-flush the gun.

It is important to remember that after releasing the trigger, mixed catalyst and material will remain in the head of the gun. Depending on the gel-time of the material- in a reasonably short period of time, it will be necessary to: ***Pull the trigger and begin spraying again. OR Solvent flush the gun.***

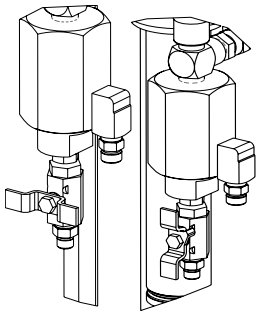
Start-Up

Color Change Procedure

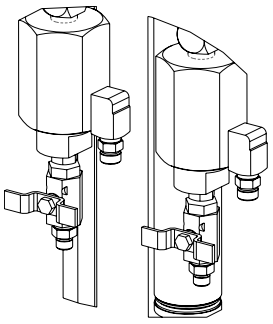
1. Turn Air Control Valve clockwise to “COLOR CHANGE” position.



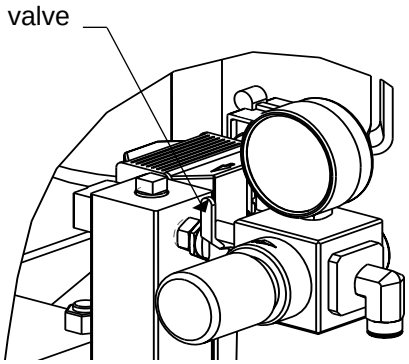
2. Turn Material Valve, P/N 21192-00, from Material Hose to Recirculating Hose (handle in vertical position). This will relieve pressure on Material Hose.



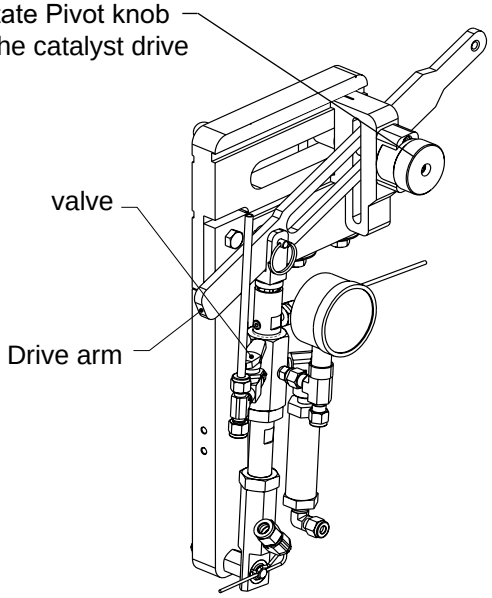
Pump will cycle to down stroke and stop.
Once the pumps are in the down position, close material valve.



3. Turn Main Air Supply Valve to the “off” position. This will relieve the air pressure on the Air Motor.

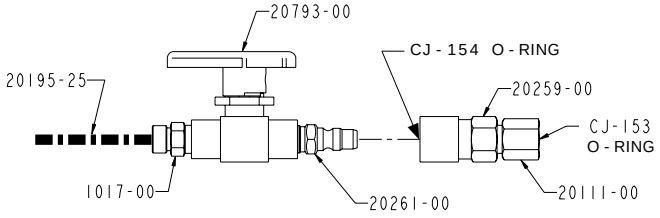


4. Pull and rotate Pivot knob to disengage the catalyst drive arm.



5. Turn Material Valve (at gun) clockwise to “OFF” position. Material valve should remain in “OFF” position until color Material Hose is required again.

6. Detach Quick-Disconnect Fitting (Gun end), P/N 20259-00, from Quick-Disconnect Fitting (Hose end),P/N 20261-00.



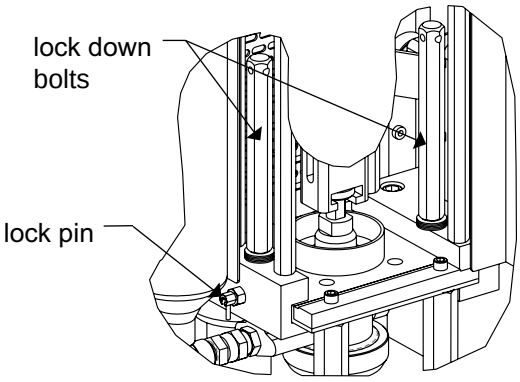
Start-Up

Material Valve MUST remain in the "OFF" position when not in use to prevent material from leaking out of hose!

When not in use, Material Hose should be coiled and stored in a safe, out-of-the-way location. Quick-Disconnect Fitting should be kept clean of dirt and overspray.

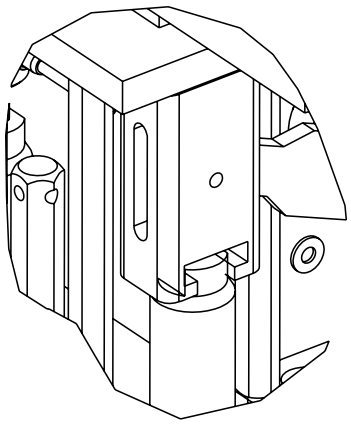
7. Securely attach desired Color Material Hose to back of Spray Gun. Make certain that Material Valve remains in "OFF" position at this time.

8. Loosen lock down bolts, P/N 20250-00.

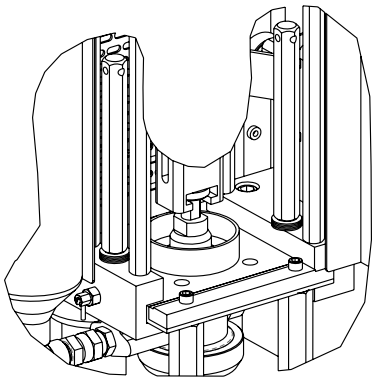


9. Slide Air Motor/Slave Pump Assembly to desired Color Pump Fluid Section and align air motor and fluid section shafts.

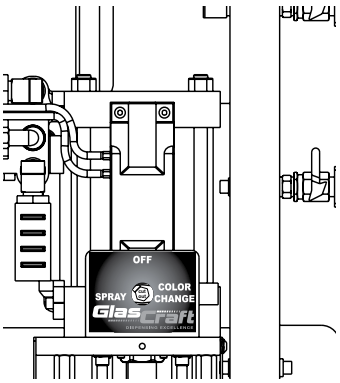
The lock pin should know snap-in place.



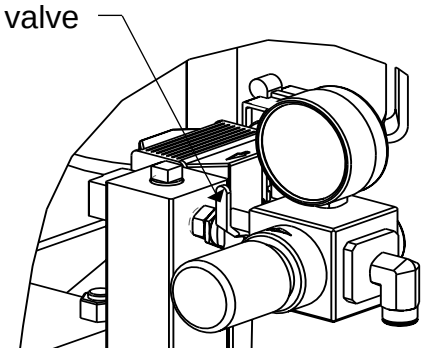
10. Tighten Lock Down Bolts securely.



11. Turn Air Control Valve counter-clockwise from "COLOR CHANGE" to 'SPRAY" position.

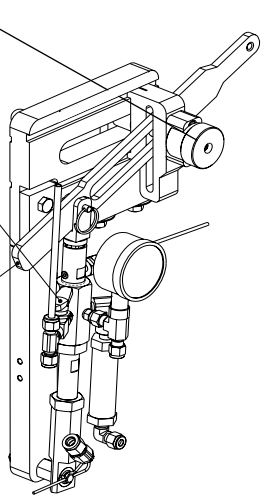


12. Turn Main Air Supply Valve slowly "On" until pump stalls.



Start-Up

13. Pull and rotate Pivot knob to disengage the catalyst drive arm.

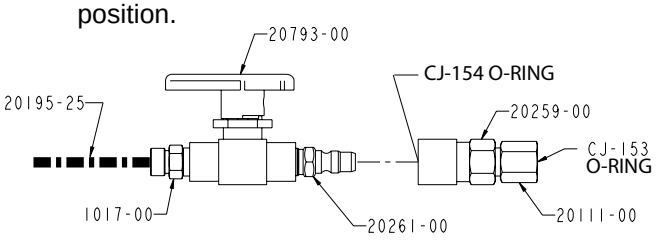


14. Turn the catalyst slave pump yellow ball valve to the open position.

15. Hand prime the pump until a steady stream of catalyst flows back to the bottle.

16. Close the ball valve. Hand stroke the pump until it developes 100-200 PSI.

17. Turn Material Valve on back of Gun to “On” position.

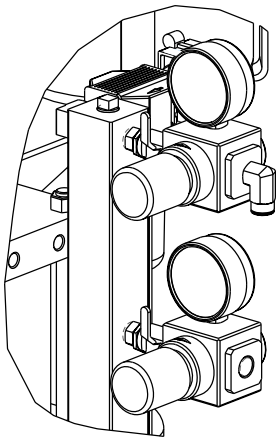


18. Color Change Procedure is now complete and normal spray operations may continue.

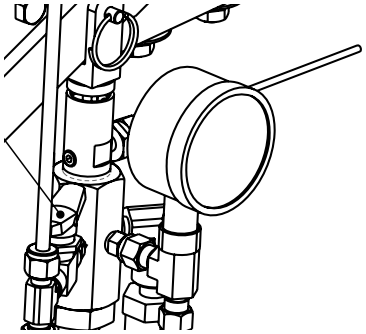
Shut-Down

Shut-Down Instructions

1. Turn the “On/Off” Ball Valves on the Air Manifold to their “Off” position.



2. Turn catalyst yellow ball valve, P/N 21228-00 to Open / Recirculation position to dump psi. and close the valve.



2. Pressure should be maintained on the material hose.

See Spray Gun User manual for proper shut-down procedures.

Material Pump should be stopped with Pump Shaft in UP position. Shaft should be cleaned of any over-spray or foreign material.

Material Pump Lube Cup should be emptied, cleaned and refilled with a clean, compatible lubricant.

GlasCraft recommends you contact your gel-coat or material supplier for their recommendation of a lubricant that will be suitable for use with your material.

Material Pump should now be cycled so that shaft is left in DOWN position during shut-down period.

Failure to cycle Pump Shaft to DOWN position may result in over-spray or leaked material to dry or harden on Shaft. When Pump is next operated, severe damages may be done to Upper Pump Seals.

See page 12 for pressure relief procedure.

Parts

MCG 20300-00

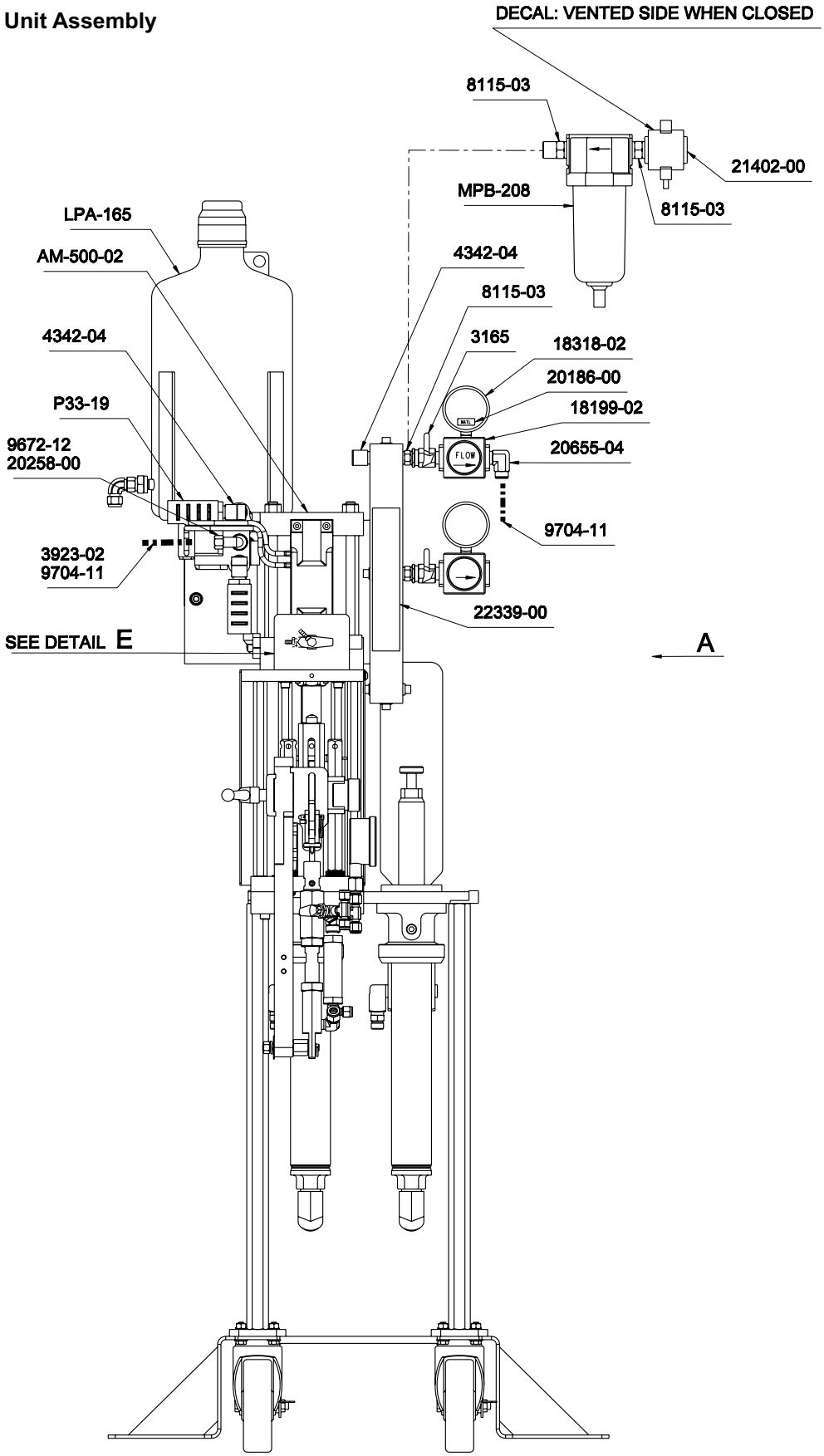
Part Number	Description
20300-00	MCG Unit w/20240-00 13:1 Material Pumps
17440-00	Grounding Clamp Assembly
GC-1392	User Manual
GAM-268-01	Material Pump Pick-Up Kit
LPA-147-2150	Spray Tip

MCG 20300-20

Part Number	Description
20300-20	MCG Unit w/22029-00 20:1 Material Pumps
17440-00	Grounding Clamp Assembly
GC-1392	User Manual
GAM-268-01	Material Pump Pick-Up Kit
LPA-147-2150	Spray Tip
SSP-157-05	Calibration Decal 20:1

Assembly Drawings

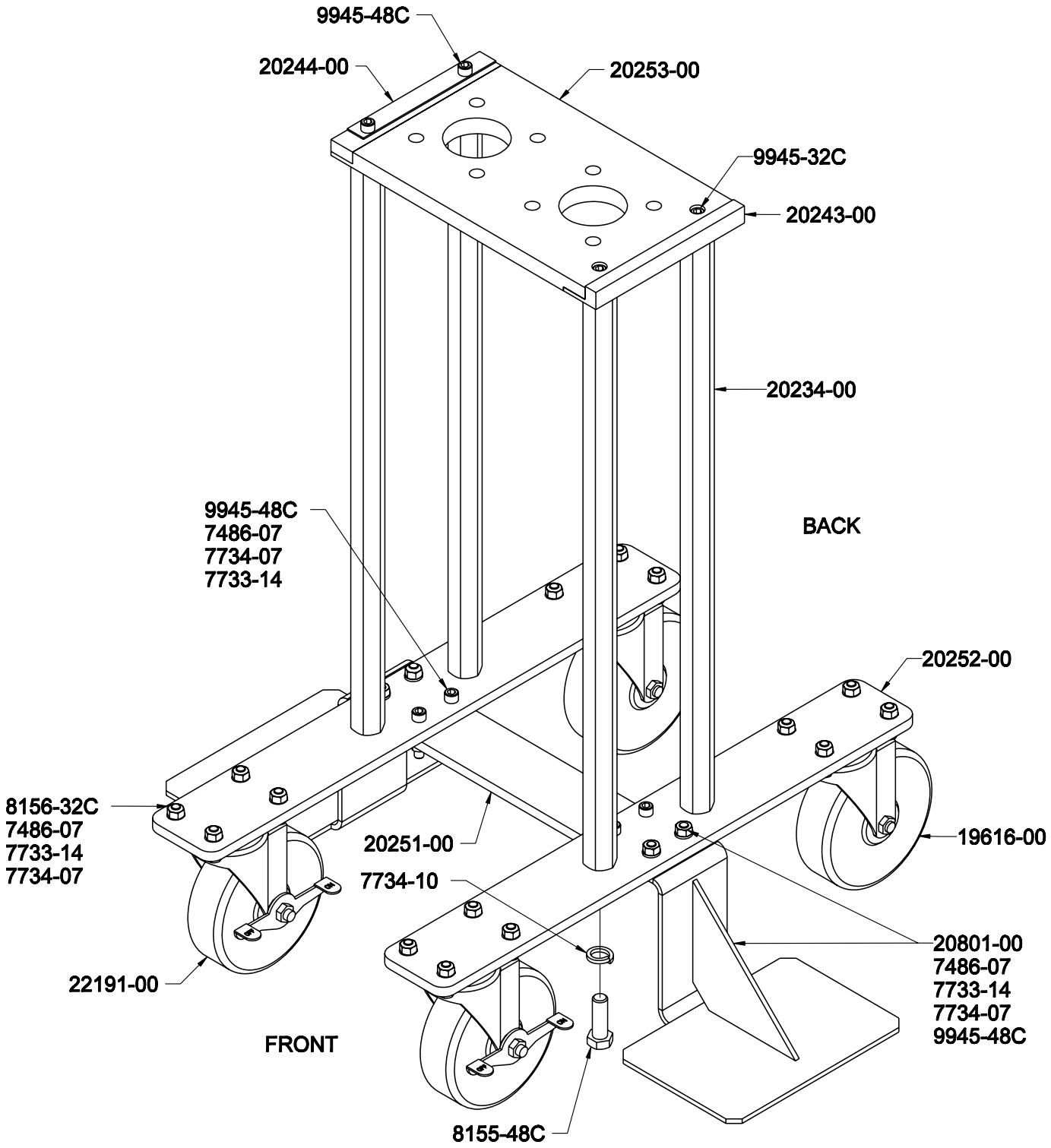
20300-00 MCG Unit Assembly



REVISION Y

Assembly Drawings

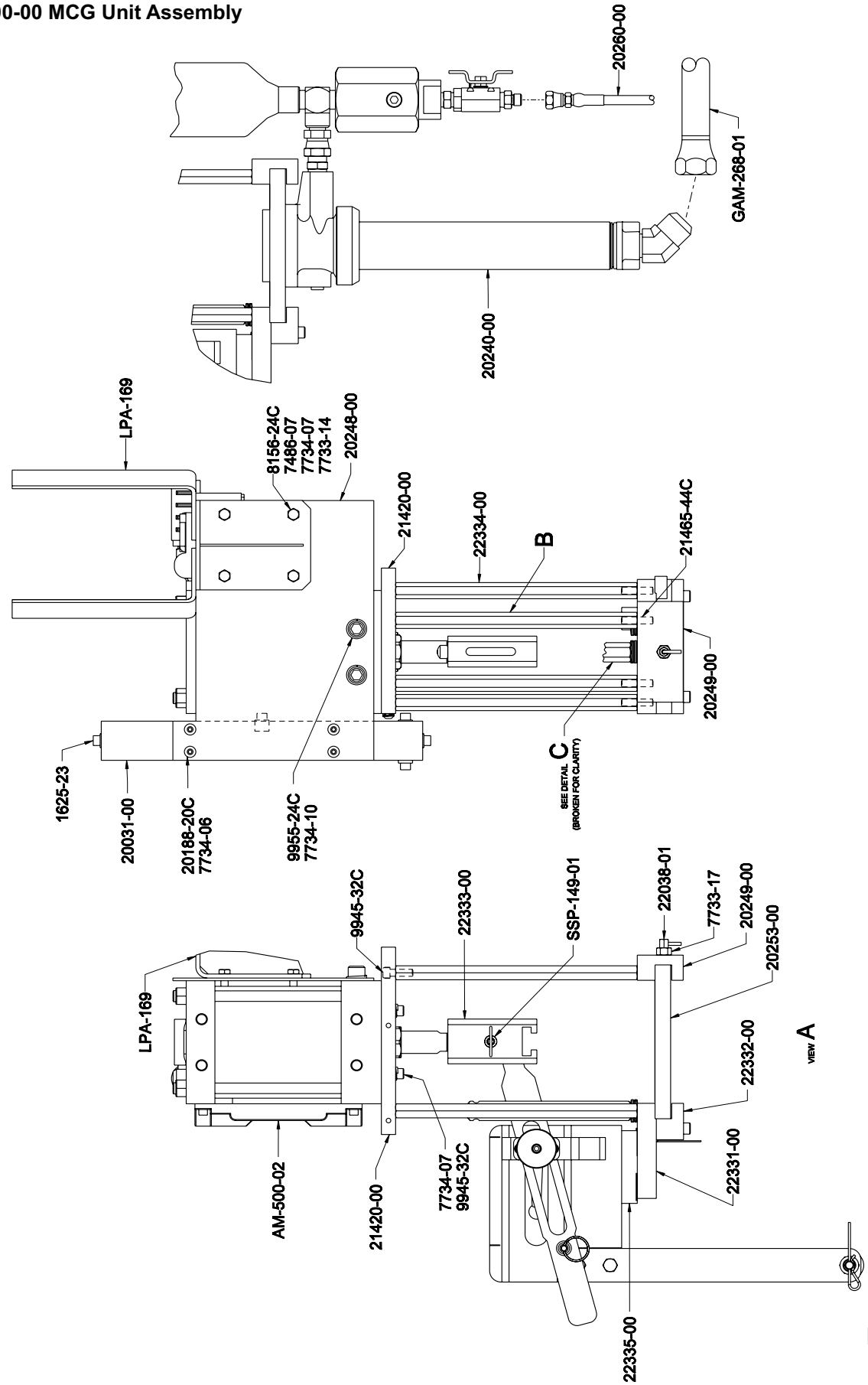
20300-00 MCG Unit Assembly



REVISION Y

Assembly Drawings

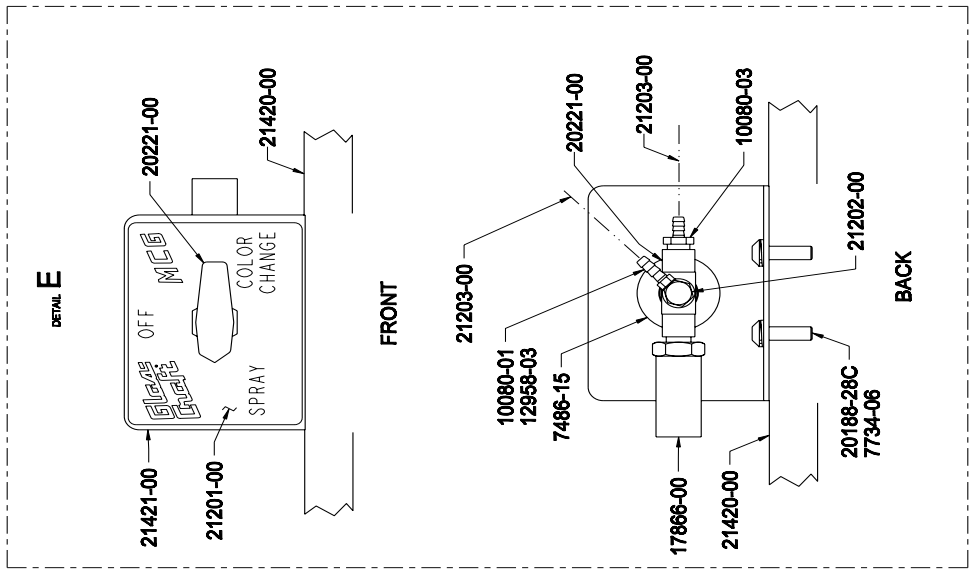
20300-00 MCG Unit Assembly

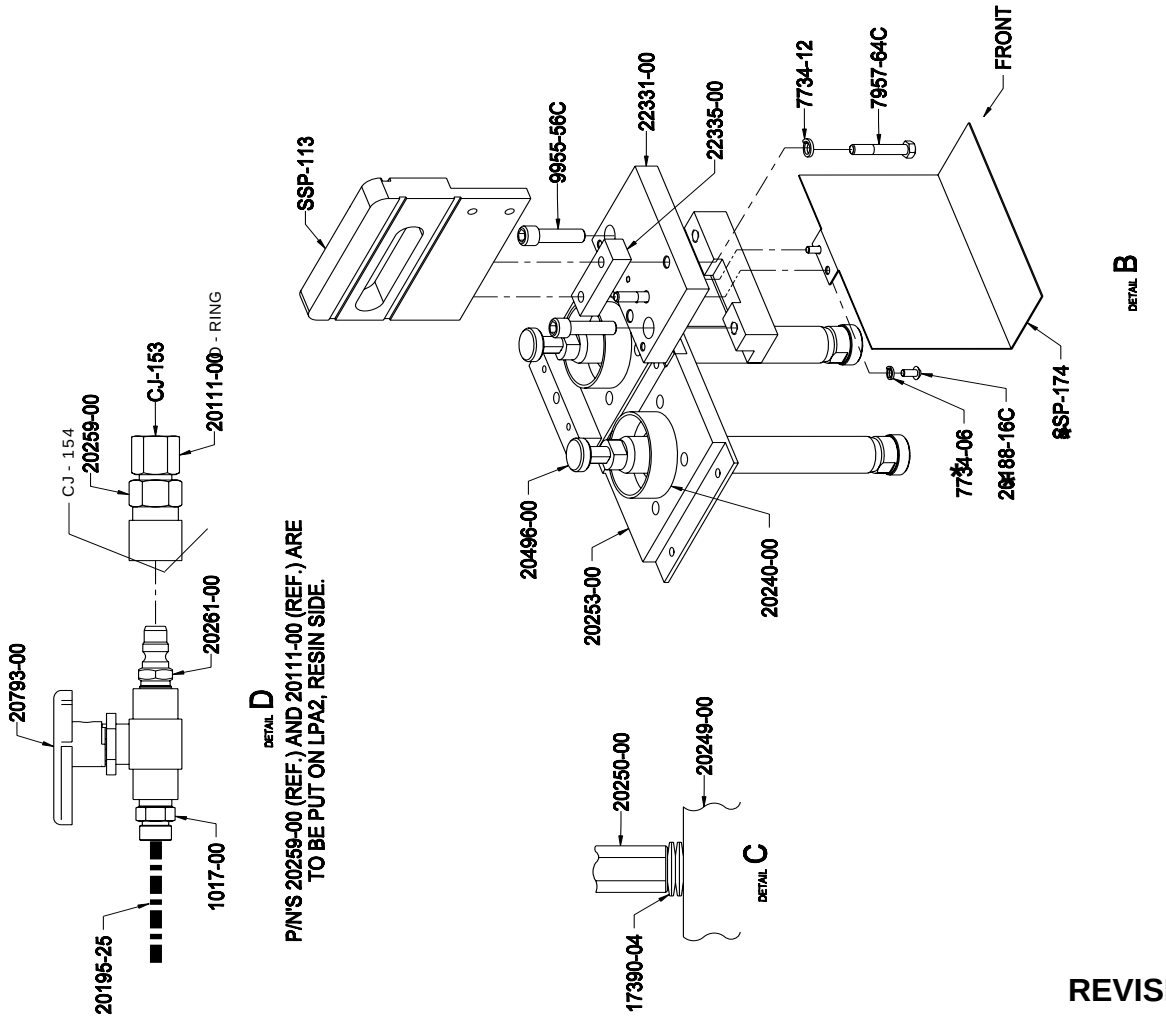


REVISION Y

Assembly Drawings

20300-00 MCG Unit Assembly





REVISION Y

Assembly Drawings

20300-00 MCG Unit Assembly

Part Number	Description
AM-500-02	5” AIR MOTOR
CJ-153	O-RING
GAM-268-01	PICK-UP TUBE
LPA-163	CAM FOLLOWER
LPA-165	CATALYST JUG
LPA-169	BOTTLE SUPPORT
MPB-208	AIR FILTER
P33-19	EXHAUST SILENCER
SM	SERVICE MANUAL
SSP-112	PLATE EXTENSION
SSP-113	PLATE ADAPTER
SSP-114	SLAVE SLIDER
SSP-115	SLAVE PUMP DRIVE ARM
SSP-116	HEX ADAPTER
SSP-148	RELEASE PIN
SSP-149-01	LOCKING DETENT PIN
SSP-157-01	CALIBRATION DECAL
SSP-159	PIVOT KNOB
SSP-161	SLAVE LOCK
SSP-162	COMPRESSION SPRING
SSP-163	PIVOT HANDLE
SSP-164	SLIDER INSERT
SSP-165	SLIDER LOCK
SSP-166	CLAMPING HANDLE
10080-01	FITTING
10080-03	FITTING
1017-00	FITTING
12958-03	GASKET FITTING
16028-03	HITCH PIN
1625-23	PIPE PLUG FITTING
17390-04	WASHER
17440-00	GROUNDING CLAMP
17866-00	PNEUMATIC SILENCER
18199-02	AIR REGULATOR
18245-01	HEAT SHRINK TUBING
18318-02	AIR GAUGE
19616-00	SWIVEL CASTER
19845-00	LITERATURE KIT
20031-00	MANIFOLD BLOCK
20111-00	ADAPTER
20186-00	MATERIAL DECAL
20188-20C	SCREW
20188-28C	SCREW

Part Number	Description
20195-25	MATERIAL HOSE
20221-00	BALL VALVE
20234-00	CART STANDOFF
20240-00	FLUID SECTION
20243-00	AIR MOTOR END STOP
20244-00	AIR MOTOR END STOP
20248-00	MOUNTING PLATE
20249-00	SLIDE MOUNT
20250-00	SLIDE PLATE FASTENER
20251-00	TIE PLATE
20252-00	CASTER PLATE
20253-00	FLUID SECTION MOUNTING PLATE
20254-00	EXPANDABLE SLEEVING
20258-00	ELBOW FITTING
20259-00	QUICK CONNECT BODY
20260-00	BLEED HOSE
20261-00	QUICK CONNECT STEM
20655-04	ELBOW FITTING
20793-00	BALL VALVE
21201-00	SYSTEM OPERATION DECAL
21202-00	FITTING
21203-00	POLYURETHANE TUBING
21402-00	LOCKOUT VALVE
21420-00	MOUNTING PLATE GUARD
21421-00	OPERATION BRACKET
21465-44C	STUD
22038-01	SPRING PLUNGER
22039-01	RATCHET BOX WRENCH
22191-00	LOCKING SWIVEL CASTER
22331-00	SSP MOUNTING PLATE
22332-00	SSP MOUNTING PLATE
22333-00	ADAPTER
22334-00	STANDOFF
22335-00	SPACER
22339-00	MCG MANIFOLD DECAL
3165	BALL VALVE
3923-02	SPIRAL WRAP
4342-04	ELBOW FITTING
7486-07	FLAT WASHER
7486-08	FLAT WASHER
7486-14	FLAT WASHER
7733-14	HEX NUT
7733-17	HEX NUT

REVISION Y

Assembly Drawings

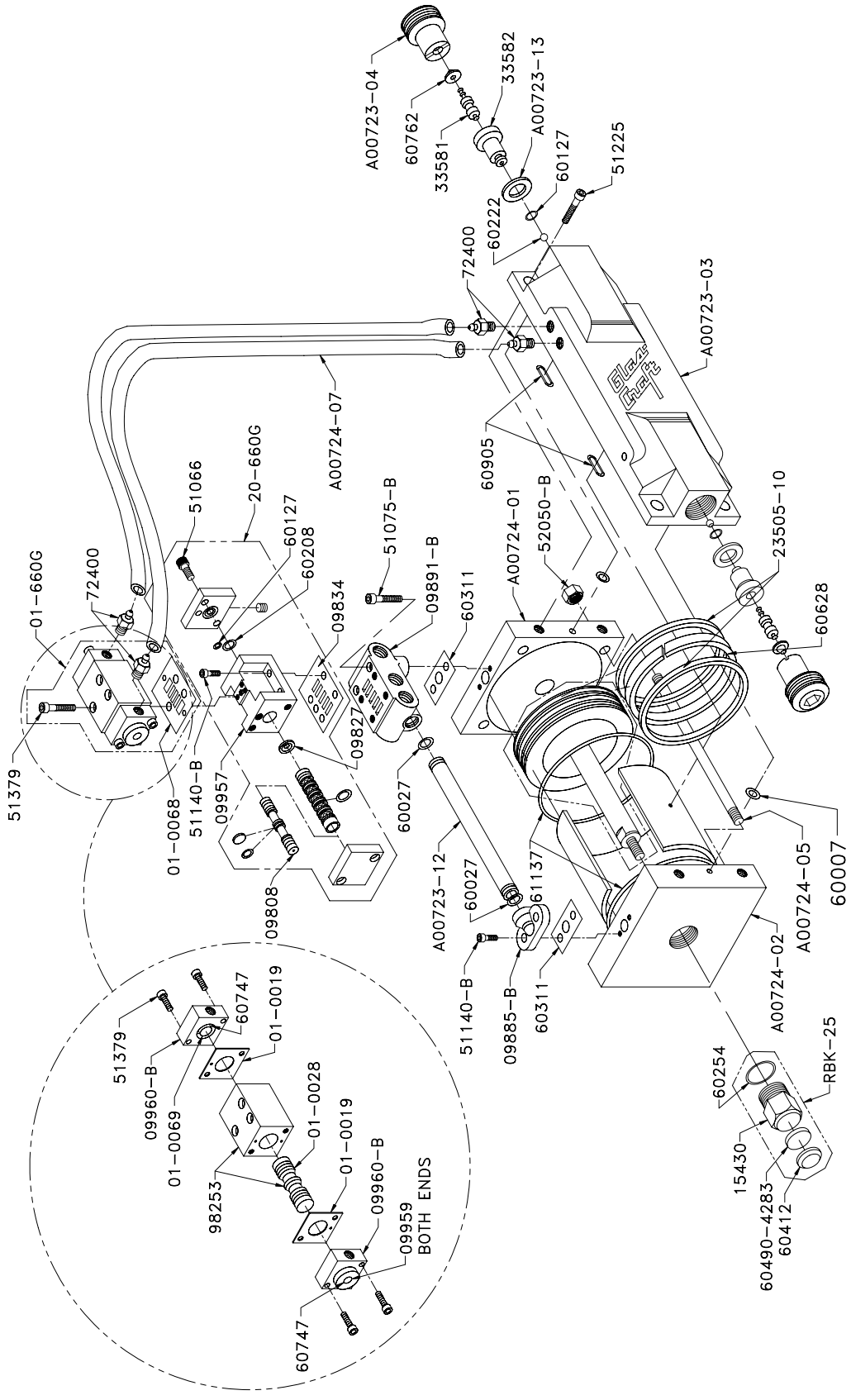
20300-00 MCG Unit Assembly

Part Number	Description
7733-17	HEX NUT
7734-06	LOCK WASHER
7734-07	LOCK WASHER
7734-10	LOCK WASHER
7734-12	LOCK WASHER
7957-32C	SCREW
7957-64C	SCREW
8115-03	PIPE FITTING
8155-48C	SCREW
8156-24C	SCREW
8156-32C	SCREW
9672-12	PIPE FITTING
9704-11	TUBING
9944-24C	SCREW
9944-32C	SCREW
9945-32C	SCREW
9945-48C	SCREW
9955-24C	SCREW
9955-56C	SCREW

REVISION Y

Sub-Assembly Drawings

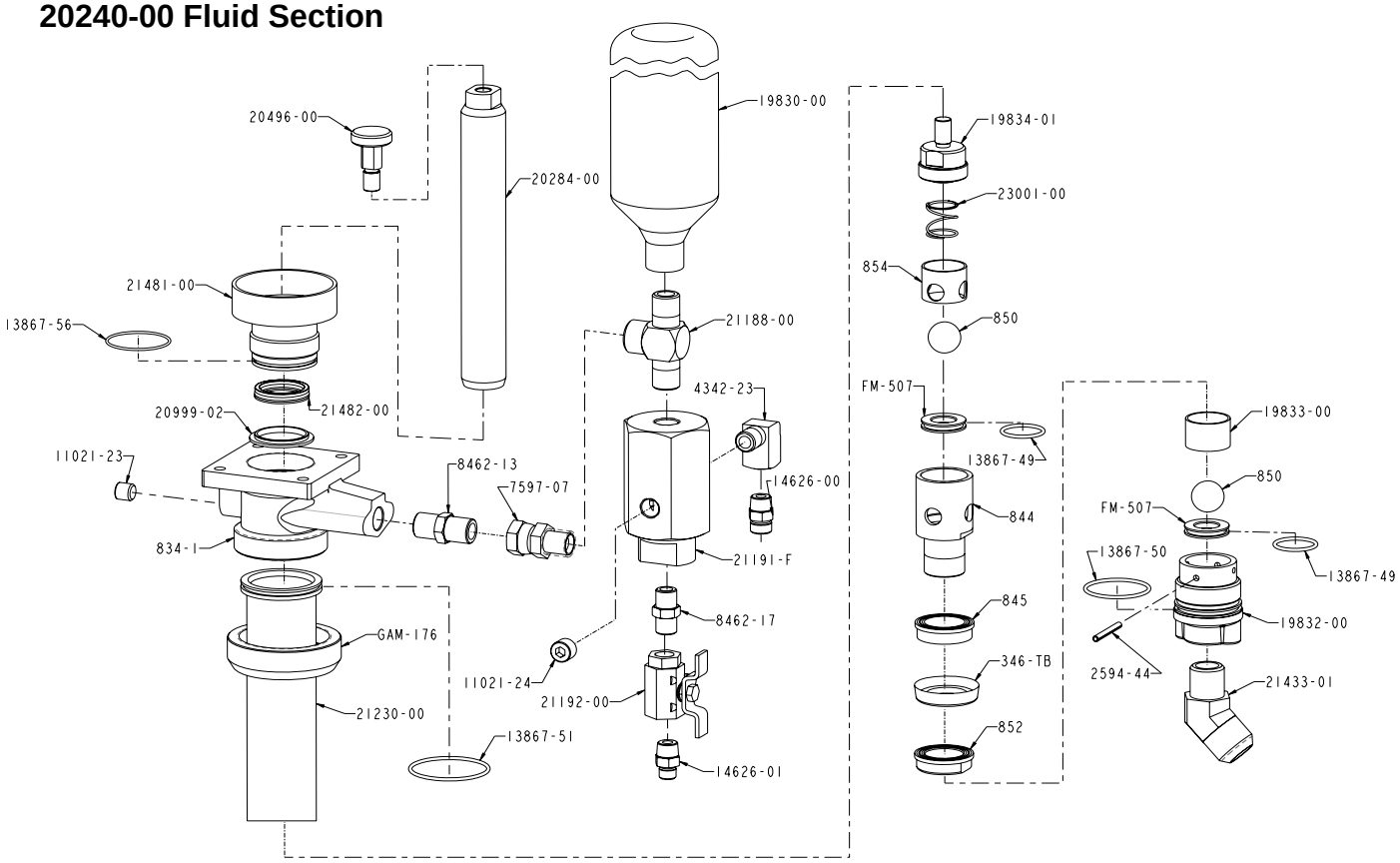
AM-500-02 Air Motor Assembly



REVISION S

Sub-Assembly Drawings

20240-00 Fluid Section



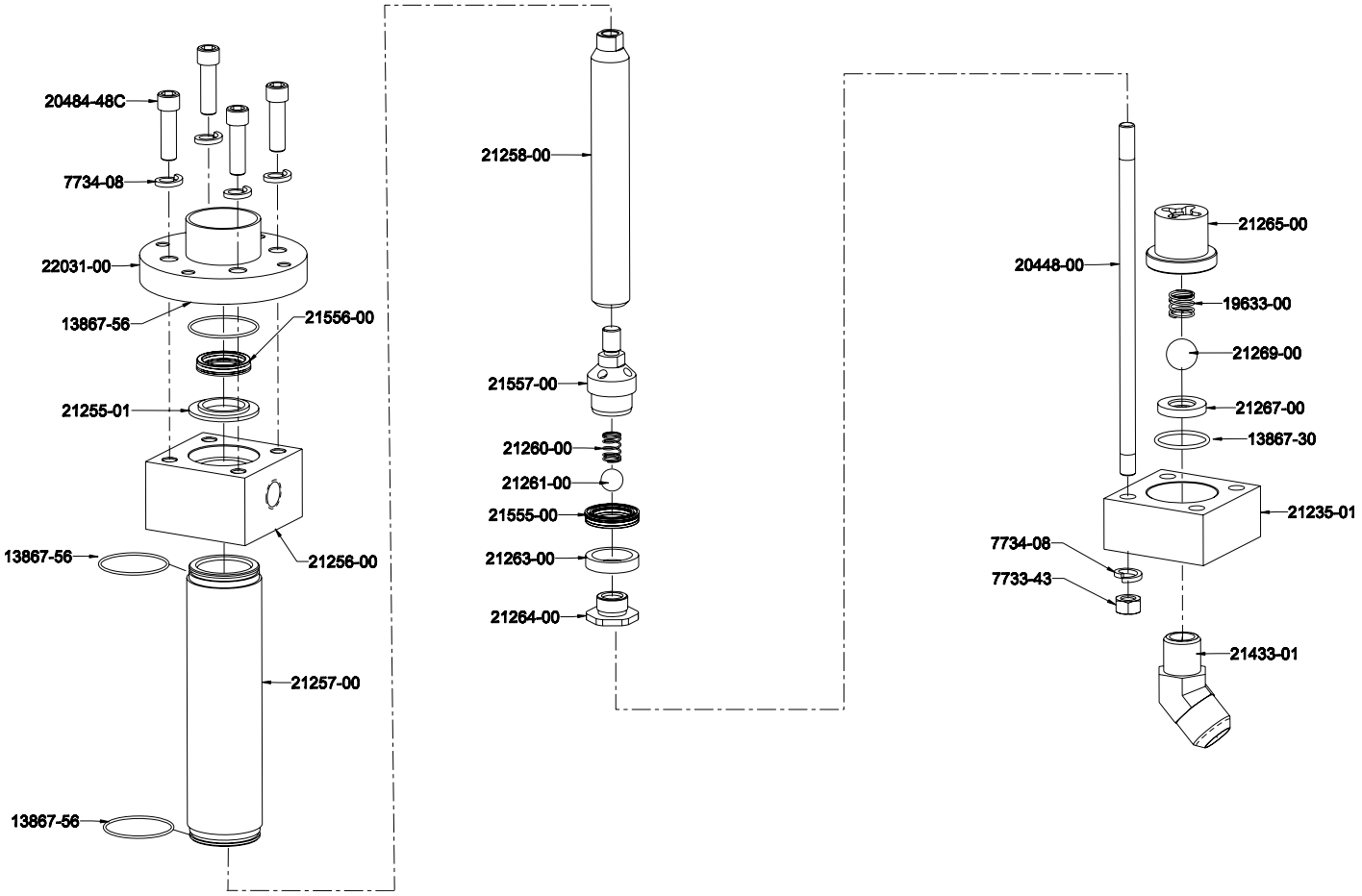
Part Number	Description	Qty.
FM-507	VALVE SEAT	2
GAM-176	RETAINING RING	1
11021-23	PIPE PLUG	1
11021-24	PIPE PLUG	1
13867-49	O-RING	2
13867-50	O-RING	1
13867-51	O-RING	1
13867-56	O-RING	1
14626-00	FITTING	1
14626-01	FITTING	1
19830-00	SURGE CHAMBER	1
19832-00	FOOT VALVE HOUSING	1
19833-00	VALVE FOOT SPACER	1
19834-01	VALVE BODY ADAPTER	1
20284-00	PUMP SHAFT	1
20496-00	QUICKSLIDE COUPLING	1
20999-02	WASHER	1
21188-00	PIPE TEE	1
21191-F	FLUID FILTER	1
21192-00	BALL VALVE	1

Part Number	Description	Qty.
21230-00	LOWER CYLINDER	1
21433-01	ELBOW FITTING	1
21481-00	HOUSING SEAL	1
21482-00	HIGH VISCOSITY SEAL	1
23001-00	COMPRESSION SPRING	1
2594-44	ROLL PIN	1
346-TB	CYLINDER MATERIAL CUP	1
4342-23	ELBOW FITTING	1
7486-07	WASHER	4
7597-07	FITTING	1
7733-14	HEX NUT	4
7734-07	LOCK WASHER	4
834-1	CYLINDER PUMP ADAPTER	1
844	LOWER CUP VALVE BODY	1
845	LOWER CUP SPACER	1
8462-13	FITTING	1
8462-17	FITTING	1
850	BALL VALVE	2
852	LOWER CUP RETAINER NUT	1
854	VALVE BODY SPACER	1
9945-48C	SCREW	4

REVISION DD

Sub-Assembly Drawings

22029-00 Fluid Section



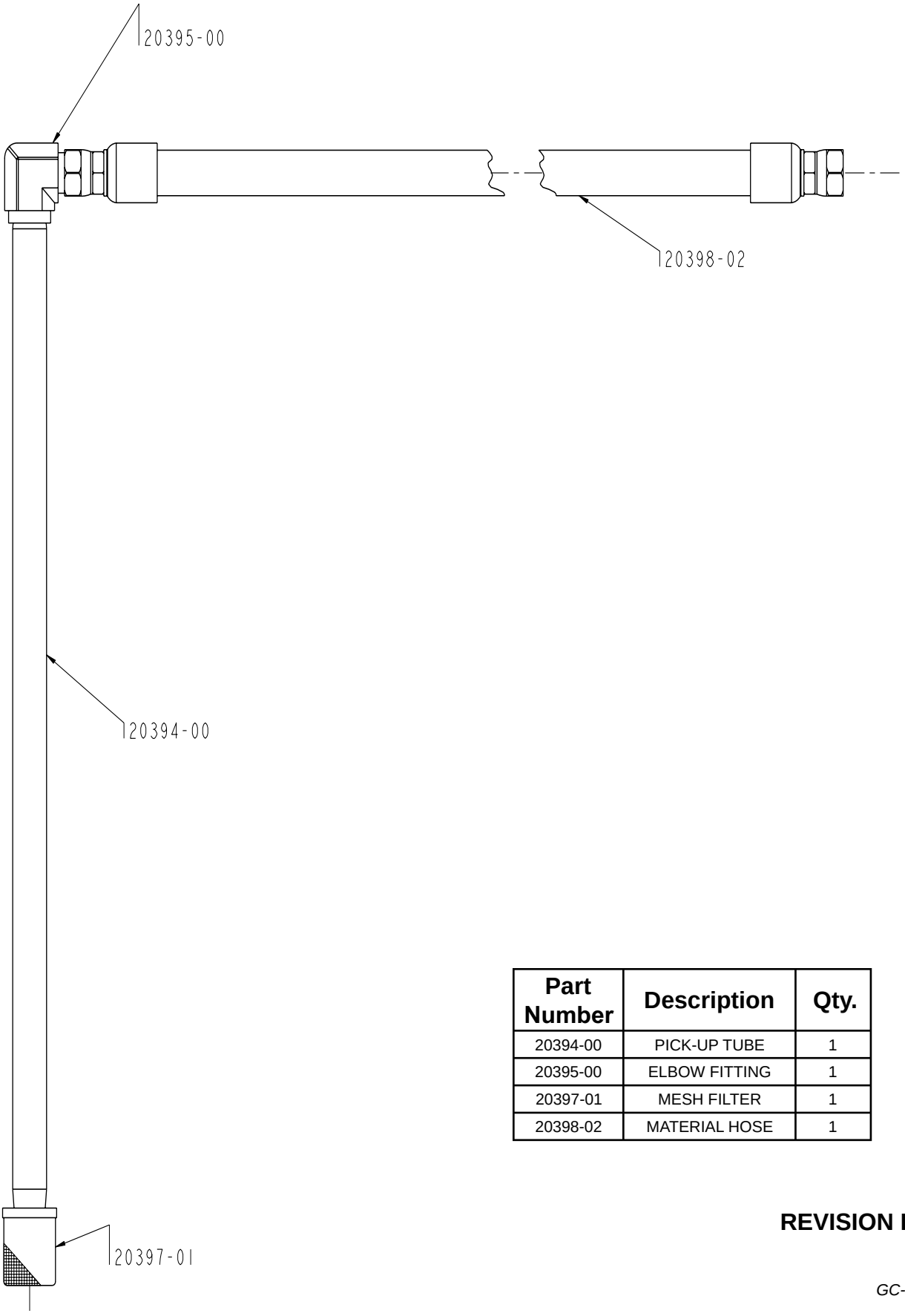
Part Number	Description	Qty.
13867-30	O-RING	1
13867-56	O-RING	3
19633-00	COMPRESSION SPRING	1
20448-00	TIE ROD	4
20484-48C	SCREW	4
21235-01	PUMP BASE	1
21255-01	UPPER SUPPORT WASHER	1
21256-00	PUMP HEAD	1
21257-00	PUMP CYLINDER	1
21258-00	PUMP SHAFT	1
21260-00	SPRING	1
21261-00	SST BALL	1
21263-00	PISTON GUIDE	1

Part Number	Description	Qty.
21264-00	TRANSFER HOUSING SEAT	1
21265-00	BALL HOUSING	1
21267-00	FOOT VALVE SEAT	1
21269-00	FOOT VALVE BALL	1
21433-01	ELBOW FITTING	1
21555-00	LOWER PUMP SEAL	1
21556-00	UPPER PUMP SEAL	1
21557-00	TRANSFER HOUSING	1
22031-00	SEAL HOUSING	1
7733-43	HEX NUT	4
7734-08	LOCK WASHER	8
SM-1429	PARTS LIST	1

REVISION D

Sub-Assembly Drawings

GAM-268-01 Material Pick-Up Kit

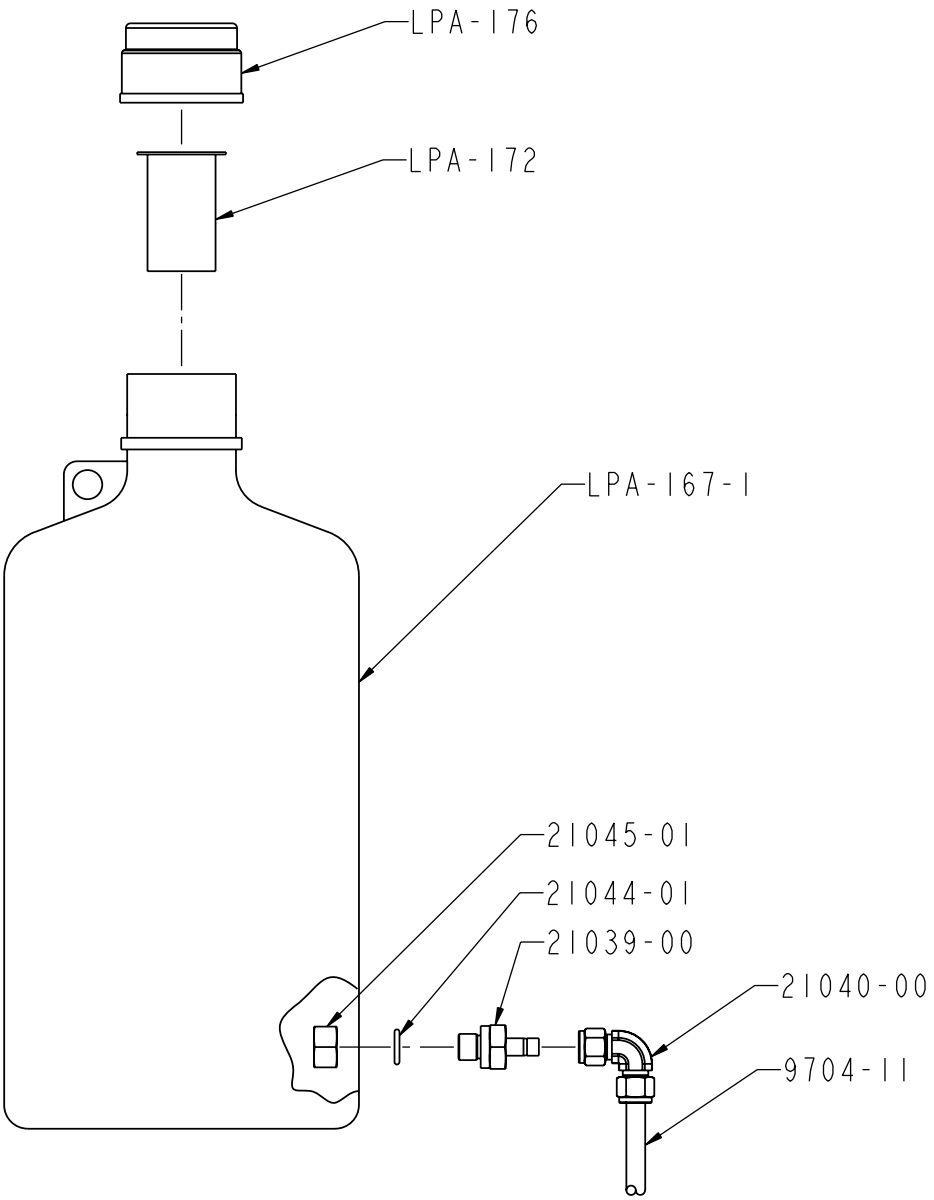


Part Number	Description	Qty.
20394-00	PICK-UP TUBE	1
20395-00	ELBOW FITTING	1
20397-01	MESH FILTER	1
20398-02	MATERIAL HOSE	1

REVISION D

Sub-Assembly Drawings

LPA-165 Catalyst Bottle



Part Number	Description	Qty.
LPA-167-1	BOTTLE	1
LPA-172	SCREEN	1
LPA-176	CAP	1
21039-00	TUBE ADAPTER	1
21040-00	ELBOW FITTING	1
21044-01	SEAL	1
21045-01	HEX NUT	1
9704-11	TUBING	5

REVISION N

Maintenance

Before performing any maintenance on this System - Follow pressure relief procedures on page 12.

GlasCraft recommends the use of TGC FRP TOOL & GUN CLEANER for...
> cleaning of spray guns, spray tips, rollers, brushes, hoses, etc. ...as well as any general shop clean-up!

It is recommended that the following service be performed on a weekly basis.

1. Inspect and lubricate Catalyst Slave Pump Linkage. (See Catalyst Slave Pump User Manual.)

2. Inspect Pump Shafts on Material and Catalyst Pumps, making certain they are clean and free of overspray or foreign material. Clean and lubricate as required.

3. Inspect Gun Valve Needle Shafts, making certain they are clean and free of over-spray or foreign material. Clean and lubricate as required. (See Spray Gun User Manual.)

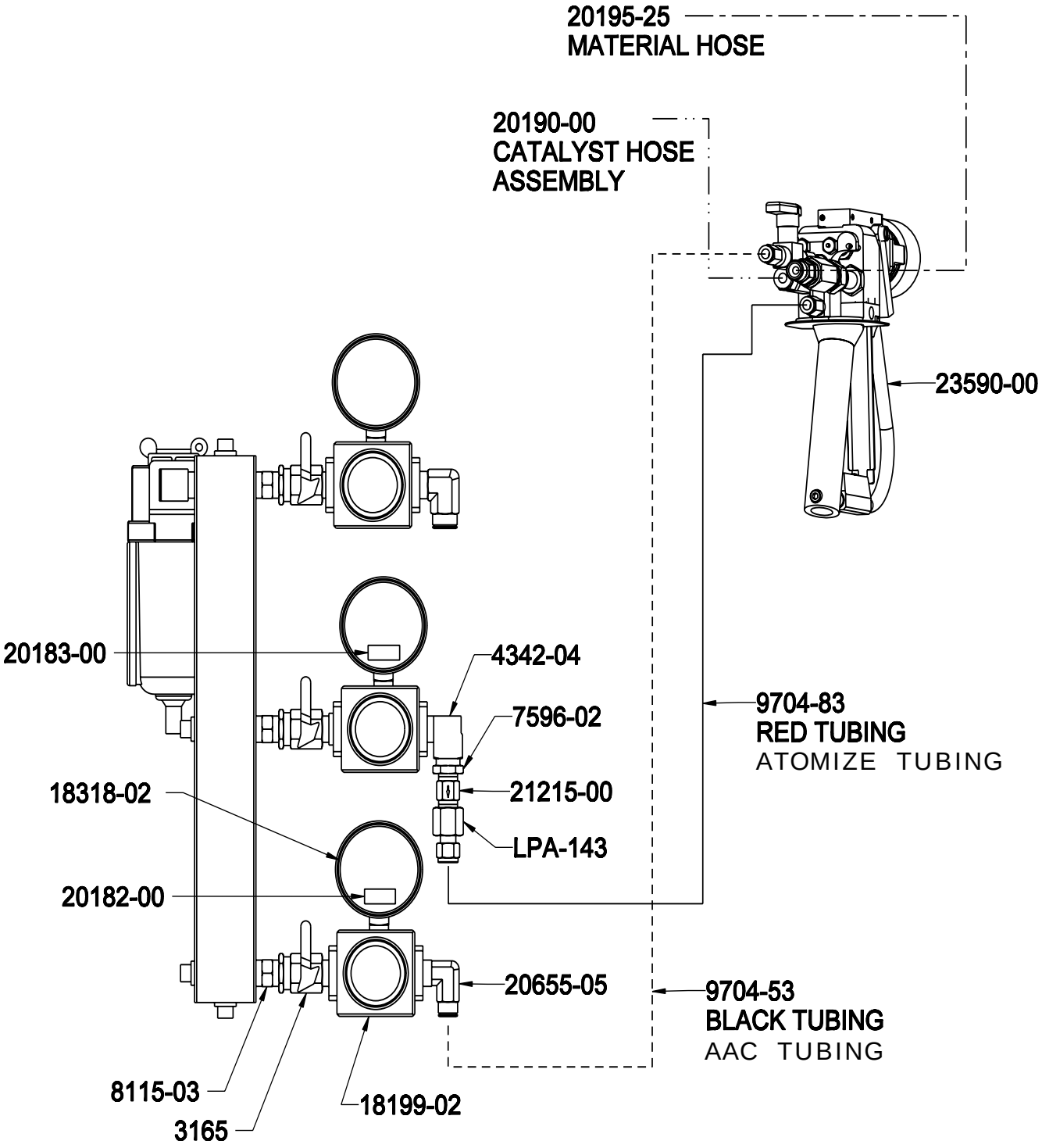
Make certain all air and material valves are in their "OFF" position.

GlasCraft recommends that you contact your gel-coat and/or material supplier concerning material pot-life during extended periods of shut-down.The decision as to whether or not to leave material in your system should be based on information from your material suppliers as well as GlasCraft. Contact GlasCraft Technical Department for any questions.

Consult your local authorized GlasCraft distributor for more information concerning system storage.

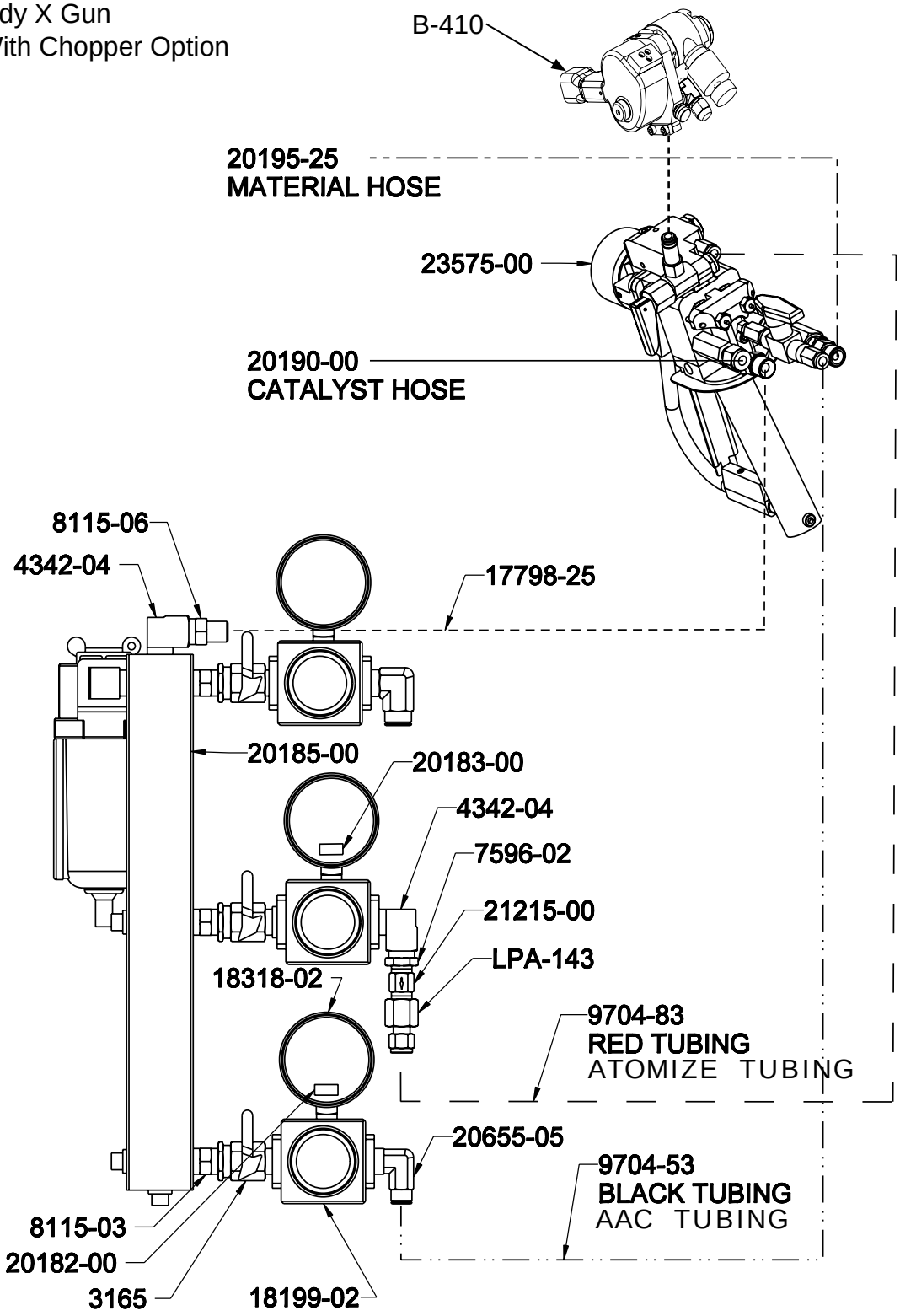
Accessories

22353-00 Indy X Gel-Coat Gun



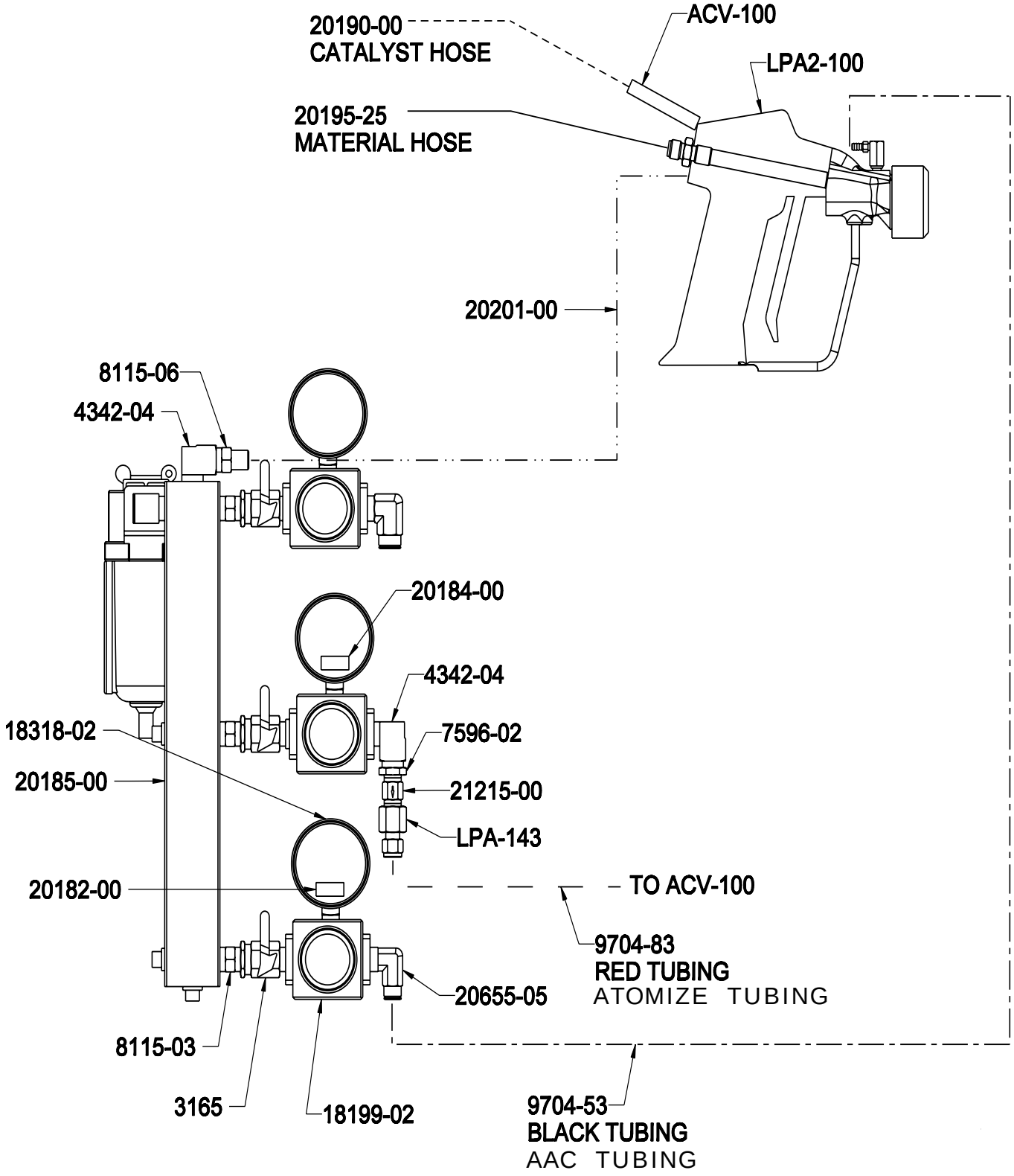
Accessories

22353-01 Indy X Gun
22352-00 With Chopper Option



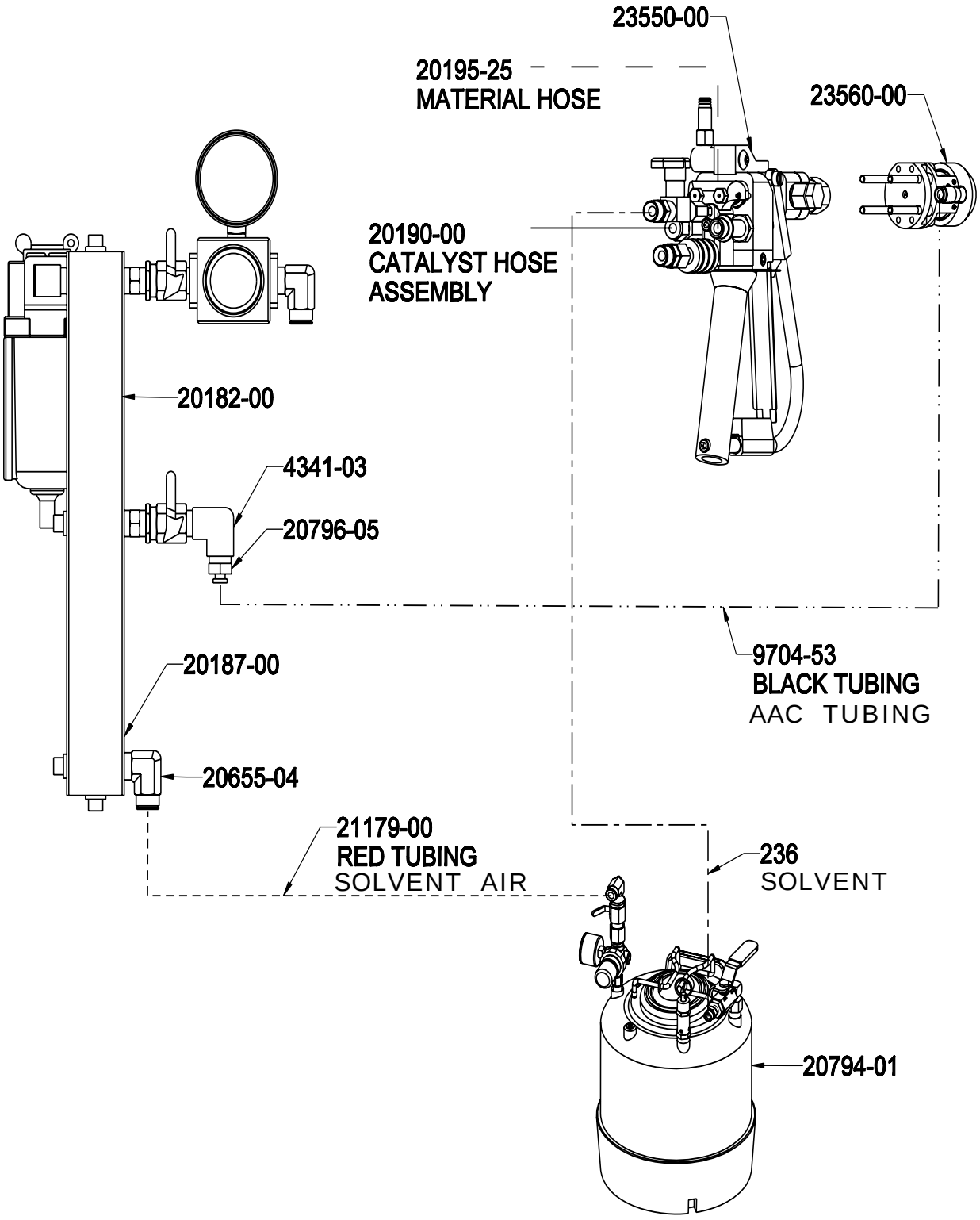
Accessories

22354-00 LPA2 Gun With 3WPG-10-K Chopper Option



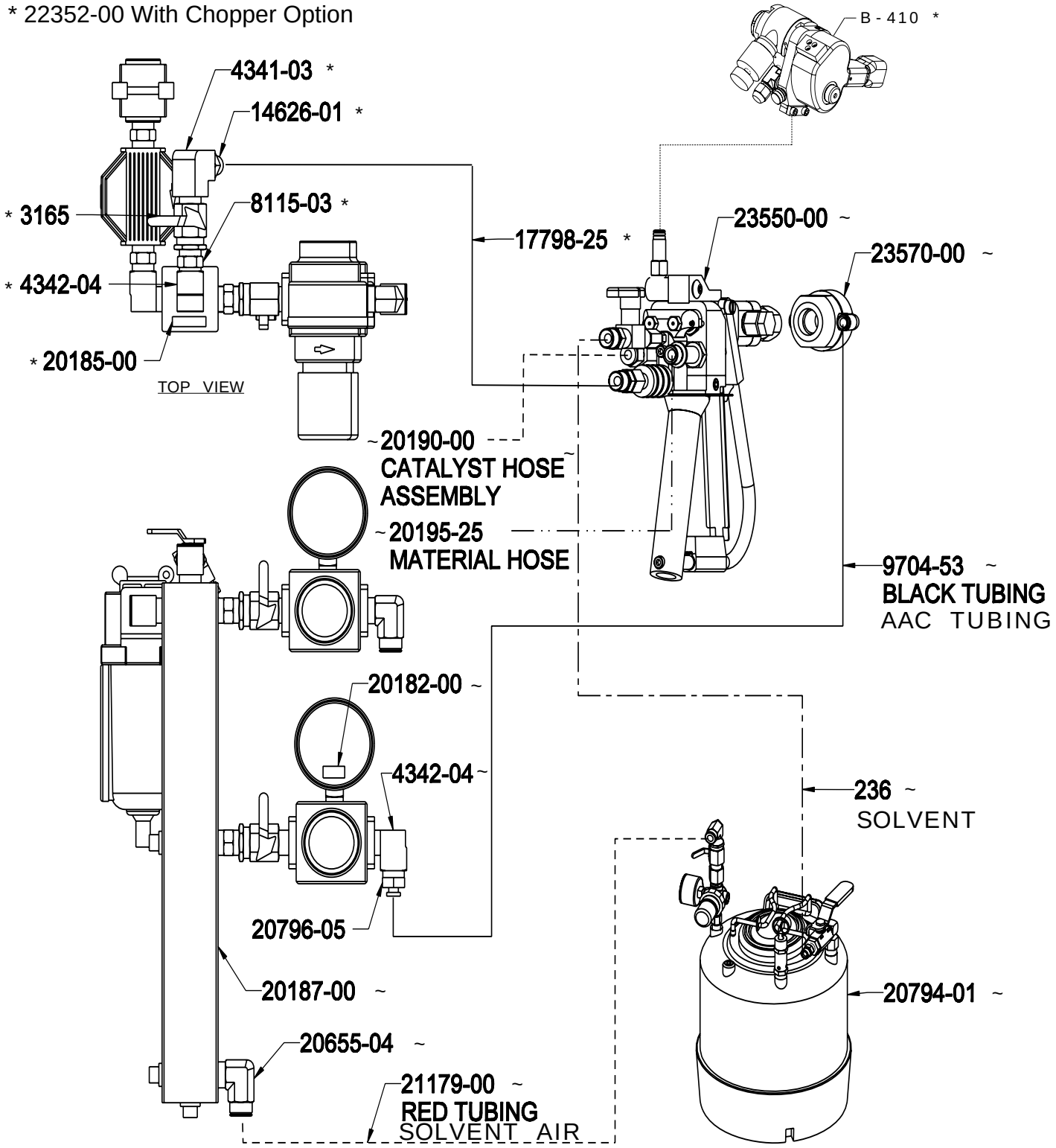
Accessories

22351-00 Indy Gel-Coat Gun With Bolt On



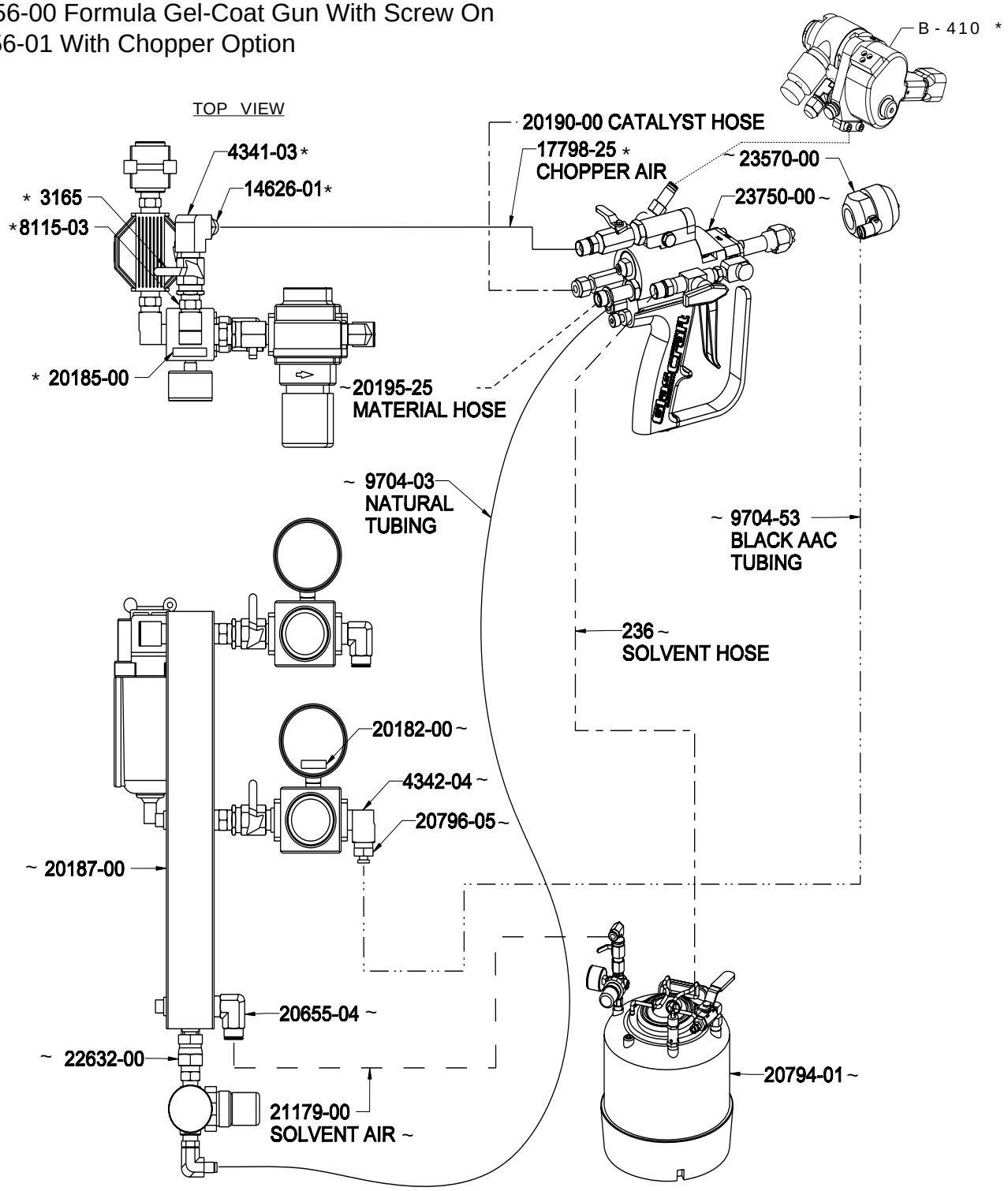
Accessories

~ 22351-01 Indy Gel-Coat Gun With Screw On
* 22352-00 With Chopper Option



Accessories

~ 22356-00 Formula Gel-Coat Gun With Screw On
* 22356-01 With Chopper Option

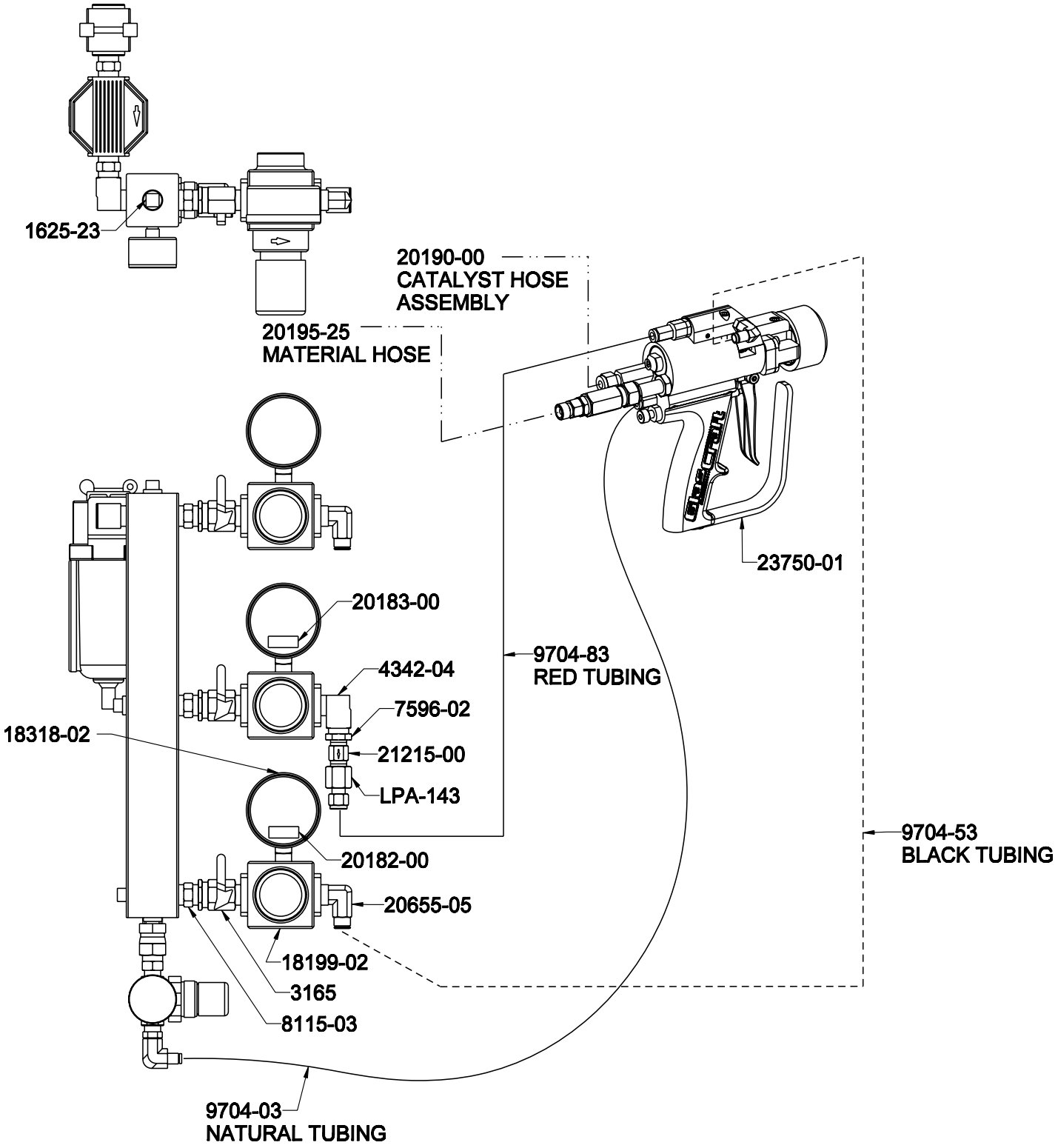


NOTE - Remove: 23765-00 Chopper mounting assembly and place 7716-06C set screw in middle tapped hole - (USE LOCTITE MEDIUM STRENGTH TO KEEP FROM LEAKING)

Reason: To remove extra weight and bulk from the gun, for gelcoat application. See 23750-00 Formula gun manual for more information.

Accessories

22356-02 Formula X Gun



Technical Data

Category	Data
Maximum Fluid Working Pressure (20240-00)	1300 psi. (9 MPa, 90 bar)
Maximum Fluid Working Pressure (22029-00)	2000 psi (14 MPa, 138 bar)
Maximum Air Inlet Pressure	100 psi (0.7 MPa, 7 bar)
Typical Flow Rate of Pattern Guns	Refer to gun manual
Maximum Fluid Temperature	100° F (38° C)
Air Inlet Size (Chopper)	Refer to gun manual
A Component (Catalyst) Inlet Size	1/4 in. Tube
B Component (Resin) Inlet Size	1 5/16-12 UN-2A Male
A Component (Catalyst) Outlet Size	1/4 in. Tube
B Component (Resin) Outlet Size	1/4-18 NPS Male
Solvent Flush	1/4-18 NPS Male
Sound Pressure (20240-00)	84.83 dB(A)
Sound Pressure (22029-00)	84.83 dB(A)
Sound Power, measured per ISO 9614-2 (20240-00)	87.04 dB(A)
Sound Power, measured per ISO 9614-2 (22029-00)	87.04 dB(A)
Dimensions (2-Color)	30 L X 30 W X 59 H (760 X 760 X 1500 mm)
Weight (2-Color)	230 Lbs. (105 kg)
Wetted Parts	Catalyst- Chemically coated aluminum, stainless steel, chemically resistant o-rings Resin- Carbon steel, carbide, chemically resistant o-rings.

Notes

Graco Ohio Standard Warranty

Graco warrants all equipment referenced in this document which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

GRACO MAKES NO WARRANTY, AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IN CONNECTION WITH ACCESSORIES, EQUIPMENT, MATERIALS OR COMPONENTS SOLD BUT NOT MANUFACTURED BY GRACO. These items sold, but not manufactured by Graco (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties. In no event will Graco be liable for indirect, incidental, special or consequential damages resulting from Graco supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Graco, or otherwise.

FOR GRACO CANADA CUSTOMERS

The Parties acknowledge that they have required that the present document, as well as all documents, notices and legal proceedings entered into, given or instituted pursuant hereto or relating directly or indirectly hereto, be drawn up in English. Les parties reconnaissent avoir convenu que la rédaction du présente document sera en Anglais, ainsi que tous documents, avis et procédures judiciaires exécutés, donnés ou intentés, à la suite de ou en rapport, directement ou indirectement, avec les procédures concernées.

Graco Ohio Information

TO PLACE AN ORDER, contact your Graco distributor or call to identify the nearest distributor.
Phone: 1-800-746-1334 **or Fax:** 1-330-966-3006

All written and visual data contained in this document reflects the latest product information available at the time of publication. Graco reserves the right to make changes at any time without notice.

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